

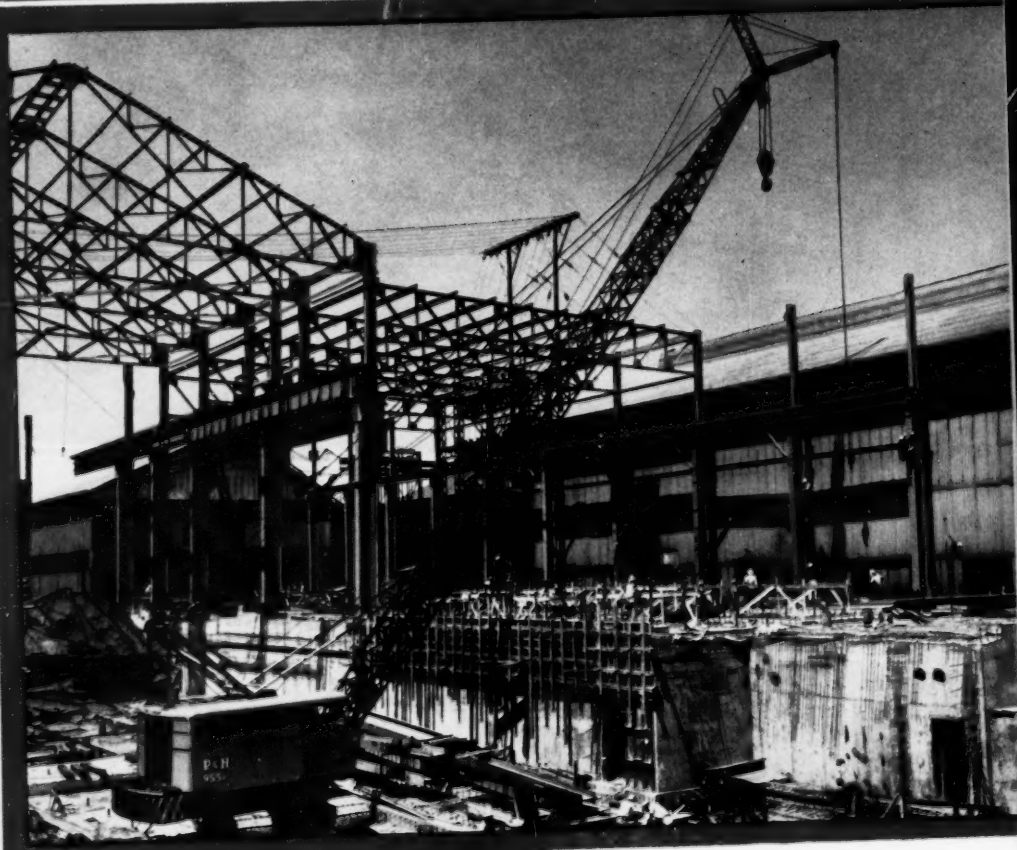
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P. & M. Crane Corp. is erecting construction of the new and  
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\$25,000,000 is being spent for expansion of facilities.

OCTOBER 1952

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service  
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wood  
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industry

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In an industry where so much depends on service, Amcreco offers facilities second to none. But even more important, these facilities are backed by wood preserving experience and know-how that results from nearly half-a-century's intensive study and research into wood preserving methods and problems.

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18 FIELD SALES OFFICES TO SERVE YOU

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CONTRACTORS  
STAY  
SUCCESSFUL  
WITH  
PROVED  
EQUIPMENT!**

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*for*  
**C. J. Langenfelder  
& Sons, Inc.**  
**Baltimore, Md.**



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*Successful  
Contractors  
Stay Successful  
with  
Proved Equipment*



**Howard Blair**  
Albany, Calif.

# DIGS IN 1,000 Gasoline Storage Tanks



1. Blair's "QUICK-WAY" starts excavation for 10,000 gallon tank at San Leandro, California. Note special built goose neck boom used to increase digging depth.



2. At full depth, "QUICK-WAY" squares up excavation using 1/2-yard bucket.



3. Same "QUICK-WAY" attachment picks up 9000 lb. tank.

## ...in 2½ Years with 2 "QUICK-WAYS"

Reg. U. S. Pat. Off.

and handles numerous other excavating and ditch digging jobs in between.

### Digs, lowers tank, backfills, all with the same machine

"We've worked our two "QUICK-WAY" model E's from 8 to 12 hours a day, six days a week, for the past two and one half years," says Howard Blair. "And we've dug in over 1000 gasoline tanks during that period. In a single day, one "QUICK-WAY" has dug in and placed two 10,000 gallon tanks. With two machines operating we've excavated and set in six 7500 gallon tanks in a single working day and eight 4000 gallon tanks in one day. Our trench hoe bucket—with side cut teeth—handles 1/2 yard capacity without any trouble.

"We do the digging and swing the tanks into place with the same rig by hooking a cable around the end of the boom of our trench hoe. In this manner we handle tanks up to 9000 pounds.

"Our two "QUICK-WAYS" have been real money makers. We've only had three minor repairs in two and one half years and we've operated both machines day in and day out."

*Howard Blair*

Blair Excavators  
Albany, California



4. Tank is lowered into hole, 30' x 9' x 12½', with "QUICK-WAY".



5. Tank in place. "QUICK-WAY" Backfiller will replace earth. Entire job took only 5½ hours.

### GET INTO A PROFITABLE BUSINESS OF YOUR OWN WITH A "QUICK-WAY"

Invest in a truck-mounted "Quick-Way" and you're in business. If you own a "Quick-Way," your services are always in demand. Contract for handling aggregate and building materials, excavation work, digging ditches, pouring concrete, loading and unloading heavy materials of all kinds. There's big earnings with low investment in "Quick-Way."

Only "QUICK-WAY" gives you "Quick-Way" quality construction—all steel for strength and lightness, accurate balance, high capacity to weight ratio. See your distributor for a free demonstration.

### "QUICK-WAY" TRUCK SHOVEL DISTRIBUTORS:

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The CONSTRUCTION magazine is published in four editions: C edition is for North Carolina and South Carolina; S edition, Alabama, Florida, Georgia and Tennessee; N edition, Kentucky, Maryland, Virginia and West Virginia; W edition, Arkansas, Louisiana, Mississippi, Missouri, Oklahoma and Texas.



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Managing Editor

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MANUFACTURERS RECORD  
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OCTOBER, 1952

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these cost-reducing  
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Also attachments for using wire brushes, sanding discs and buffing pads.

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*The finest masonry work starts with*

## Cumberland Masonry Cement

West Side High School,  
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strong Construction Co.,  
Contractor; Builders Sup-  
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### Cumberland Masonry Cement is made better

It gives you mortar that's highly water repellent after hardening; that minimizes any possible leakage in the joints. It keeps them strong and tight, prevents unsightly staining of masonry surfaces. And this is only one of the many qualities, designed to help you do a better job, that are built right into Cumberland Masonry Cement.

Cumberland is made for beauty, too. Mortar made with Cumberland has, and holds, a pleasing light color, even after years of weathering. It adds to the beauty of the masonry units. Cumberland makes every job top quality, because it's better Masonry Cement.



### THE 10 BASIC REQUIREMENTS OF HIGH-QUALITY MASONRY CEMENT\*

1. Plasticity
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*\*Cumberland  
gives you all 10!*



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*Portland — High Early Strength — Air Entraining — Masonry*

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# STABILITY

## for the Toughest Jobs

the great new  
**655B LC**

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Here, too, are extra wide, extra long crawlers that reduce ground pressure to a minimum — let you swing a bigger boom without toe-in — let you maneuver safely in mud with plenty of axle clearance.

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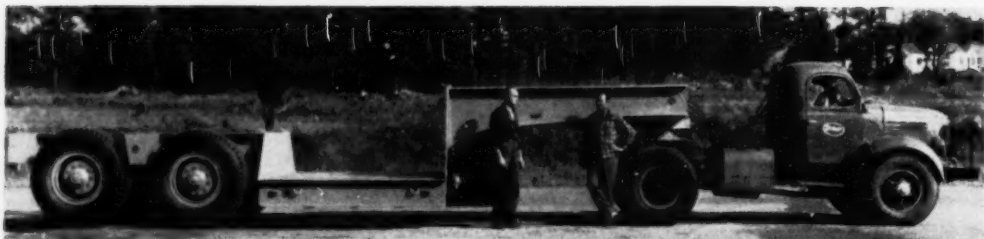
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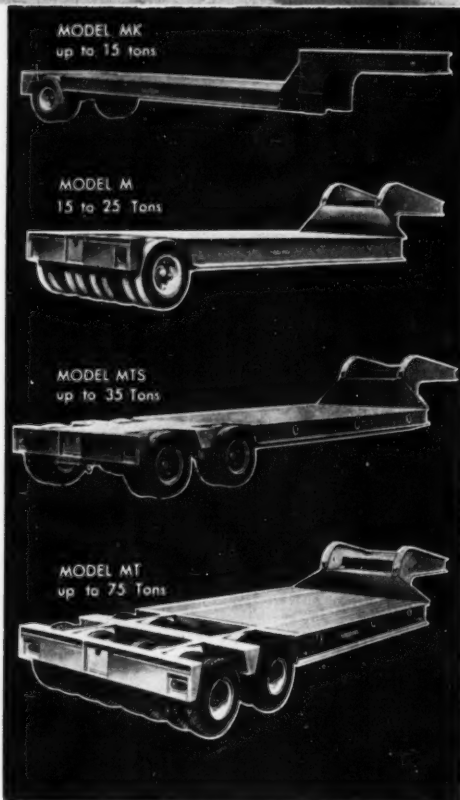


For special sizes and designs, as well as for a complete line of standard model low-bed trailers, you will find Dorsey means Dependability in heavy hauling. Carrying capacity ratings are purposely conservative.

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On saved shifting time alone

**YOU CAN GAIN UP TO 25 PERCENT  
MORE PRODUCTION**



**WITH THE MODERN SHIFT  
PATTERN ON ALLIS-CHALMERS  
HD-9 AND HD-15 TRACTORS**

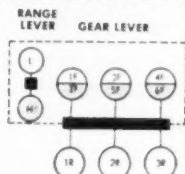
It takes just half the time and effort to change from low forward to fast reverse with the Allis-Chalmers HD-9 and HD-15 transmission. This shifting time saved becomes production time gained on bulldozing and other jobs calling for a short forward-backward cycle. For example, job studies prove that on backfilling, pusher work, working around large excavators, digging and loading with front-end shovels — other jobs where frequent shifts are required — you can make five passes in the time usually required to make four... actually increase production up to 25 percent.

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it works**

You go from any forward to any reverse speed with one simple shift of the gear lever. The only time you touch the range lever is to select the forward range you want for the job to be done — just set it and forget it.

The constant-mesh Allis-Chalmers transmission makes shifting smooth and effortless... without gear clashing. And it's so easy that the operator can *always* take advantage of high-speed reverse.

This exclusive shift pattern, together with all-steel welded construction, unit assembly, 1,000-hour lubrication, are just a few of the reasons you get more work done with the new *designed-for-your-job* Allis-Chalmers tractors.



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LINE ON EARTH!**

**HD-5**  
40 drawbar hp.,  
11,250 lb.

**HD-9**  
72 drawbar hp.,  
18,800 lb.

**HD-15**  
109 drawbar hp.,  
27,850 lb.

**HD-20**  
Hydraulic torque  
Converter Drive, 175 net  
engine hp., 41,000 lb.

**ALLIS-CHALMERS**  
TRACTOR DIVISION • MILWAUKEE 1, U. S. A.



**P&H**

*announces the appointment of*

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\*FOR THE GREATER PART OF  
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We take pleasure in announcing the appointment of Florida Equipment Company as P&H Sales and Service Representatives for the greater part of Florida. One of the most progressive and service-minded organizations in the state, Florida Equipment Company maintains complete facilities at Jacksonville, Tampa, and Miami. Here you will meet qualified men who can be of valuable assistance in the selection and use of P&H equipment — and where you can always be sure of genuine P&H repair parts and prompt service.

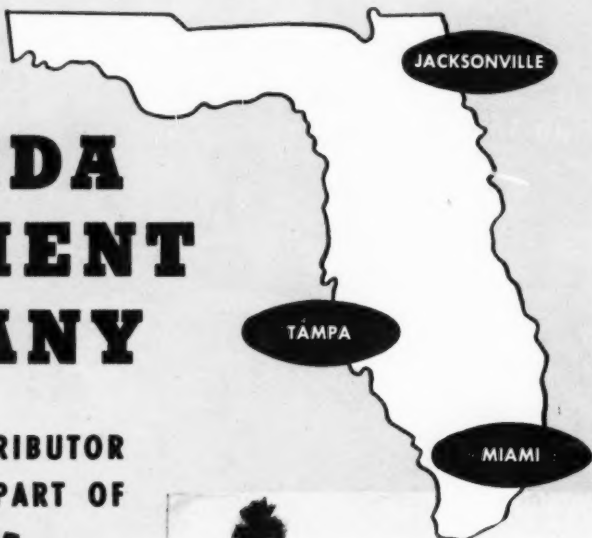
A cordial invitation is extended by General Manager William G. Harris to stop by and get acquainted with their organization. Let them show you how the many Added Values of P&H equipment pay off in added profits for you.

\*Excluding counties of Santa Rosa, Okaloosa, Walton, Holmes, Washington, Bay, Jackson, Calhoun, Gulf and Escambia.

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CORPORATION**

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Jacksonville, Fla.



Miami, Fla.

# \$4,231,800 in Road Bids Received by Florida

Florida, in one of its longest highway department openings, received bids last month for \$4,231,800 in construction located in twenty-nine counties. The proposals were opened by the Florida State Road Department and included the following projects:

**Hamilton County—Federal Aid Project No. FI-022-3(7), Job No. 3201-205** State Road No. 25, between Jasper and the Alapaha River; work consists of grading; stabilizing; paving; small drainage structures; and incidental items; three lowest bidders: Georgia-Alabama Paving Co., P. O. Box 367, Columbus, Ga., \$203,463; Cone Brothers Contracting Co., Tampa, Fla., \$218,458; W. L. Cobb Construction Co., Tampa, Fla., \$220,003;

**Holmes and Washington Counties—Federal Aid Project No. FI-006-2(2), Jobs Nos. 5201-204 and 6101-203, State Road No. 10**, between point approximately 0.4 mile west of Holmes-Washington County Line and Holmes Creek; work consists of grading; paving; constructing one 165 foot concrete bridge and three concrete box culverts of bridge length; small drainage structures; and incidental items; three lowest bidders: Smith Engineering & Construction Co., Pensacola, Fla., \$418,718; Doyle Pope, Quincy, Fla., \$435,466; Coggin & Deermont, Chipley, Fla., \$437,939;

**Hillsborough County—Federal Aid Project No. F-036-1(2), Job No. 1026-201, State Road No. 43**, between the intersection of State Roads Nos. 43 and 600 east of Tampa northeasterly to the intersection of State Roads Nos. 43 and 41; work consists of grading; stabilizing; paving; constructing a 194 foot concrete bridge overpass and a 158 foot concrete and steel bridge over a highway underpass; small drainage structures; and incidental items; three lowest bidders: Cone Brothers Contracting Co., Tampa, Fla., \$602,260; H. E. Wolfe Construction Co., St. Augustine, Fla., \$652,429; W. L. Cobb Construction Co., Tampa, Fla., \$657,821;

**Suwannee County—Federal Aid Project No. S-8(4), Job No. 3707-250, State Road No. 49**, between a point approximately 8 miles northeast of Branford and a point approximately 10 miles southeast of Live Oak. Work consists of grading; paving; one concrete box culvert of bridge length; small drainage structures; and incidental items; three lowest bidders: S. M. Wall, Gainesville, Fla., \$116,254; James H. Craggs Construction Co., Ocala, Fla., \$118,342; Caddell & Jackson, Jacksonville, Fla., \$119,215;

**Union County—Federal Aid Project No. S-27(14), Job No. 3951-251; State Road No. S-229**, between the intersection of State Roads Nos. 23 and 229 and the Union-Baker County Line; work consists of grading; paving; constructing small drainage structures; and incidental items; three lowest bidders: W. L. Cobb Construction Co., Tampa, Fla., \$118,814; The Duval Engineering & Contracting Co., Jacksonville, Fla., \$128,918; L. L. Hall Construction Co., Orange Park, Fla., \$129,614;

**Taylor County—Federal Aid Project**

**No. S-335(2), Job No. 3860-250, State Road No. S-14**, between a point approximately 3.5 miles south of the intersection of State Roads Nos. 14 and 257 and the intersection of State Roads Nos. 14 and 257 east of the Aucilla River; work consists of grading; stabilizing; paving; constructing small drainage structures; and incidental items; three lowest bidders: A. F. Rich Co., Tallahassee, Fla., \$67,054; Cone Brothers Contracting Co., \$77,139; Caddell & Jackson, Jacksonville, Fla., \$80,768;

**Citrus County—Federal Aid Secondary Project No. S-340(1), Job No. 0256-250, State Road No. S-495**, between SR 488 and a point in Crystal River; work consists of grading; stabilizing; paving; constructing small drainage structures; and incidental items; three lowest bidders: A. F. Rich Co., Tallahassee, Fla., \$127,328; W. L. Cobb Construction Co., Tampa, Fla., \$152,208; Langston Construction Co., Orlando, Fla., \$158,912;

**Lake County—Federal Aid Project No. S-341(1), Job No. 1154-250**, and State Job No. 1154-150, State Road No. S-44A, between intersection of State Roads Nos. 44

and 44A east of Eustis and the east city limits of Umatilla; work consists of grading; stabilizing; paving; small drainage structures; and incidental items; three lowest bidders: J. D. Manly Construction Co., Leesburg, Fla., \$91,075; W. L. Cobb Construction Co., \$92,054; Marion Construction Co., Ocala, Fla., \$94,561;

**Citrus County—State Project, Job No. 0208-104, State Road No. 491**, from Levento to Holder; work consists of paving and incidental items; three lowest bidders: A. F. Rich Co., Tallahassee, Fla., \$131,689; W. L. Cobb Construction Company, Tampa, Fla., \$135,658; Langston Construction Co., Orlando, Fla., \$158,937;

**Hernando County—State Project, Jobs Nos. 0800-106 and 0801-113, Howell Avenue and South Main Street in Brooksville**; work consists of paving; storm sewer, and incidental items; three lowest bidders: Cone Brothers Contracting Co., Tampa, Fla., \$94,502; A. F. Rich Co., Tallahassee, Fla., \$108,426; W. L. Cobb Construction Co., Tampa, Fla., \$114,299;

**Hillsborough County—State Project, Jobs Nos. 1003-109, 1009-111, and 1010-105, State Road Nos. 574 and 600**, in Plant City from Baker Street at North City Limits southeast to Reynolds Street, on Alexander Street from Reynolds Street to Baker Street and on Reynolds Street from Alexander Street to the Seaboard Air Line Railroad and, on Baker Street from Collins Street east to Reynolds Street; work consists of surfacing; three lowest bidders: Macasphalt Corp., Lakeland, Fla., \$23,562; Cone Brothers Contracting Co., Tampa, Fla., \$29,779; A. F. Rich Co., Tallahassee, Fla., \$30,134;

**Manatee County—State Project Job No. 1353-150, State Road No. S-64**, from a point approximately 2.50 miles west of Bradenton City Limits of Manatee Avenue North and Northwest approximately 2.101 miles; work consists of paving and incidental items; three lowest bidders: Cone Brothers Contracting Co., Tampa, Fla., \$47,703; Campbell Paving Co., \$52,900; J. W. Conner & Sons, Inc., Tampa, Fla., \$56,751;

**Polk County—State Project, Job No. 1609-114, State Road No. 17**, intersection at State Roads 700 and 25. State Project No. 1627-101, State Road No. 640, from SR 17 to SR 25 and State Project Job No. 1612-102, stock pavilion yard roads in Bartow; work consists of paving and incidental items; three lowest bidders: Polk Construction Company, Lakeland, Fla., \$28,215; Cone Brothers Contracting Co., Tampa, Fla., \$29,809; W. L. Cobb Construction Co., \$38,444;

**Polk County—State Project, Job No. 1613-111, State Road No. 60**, in Lake Wales, from SR 17 east approximately 0.226 mile; work consists of constructing storm sewer and incidental items; three lowest bidders: Cone Brothers Contracting Co., Tampa, Fla., \$11,717; S. F. MacKenzie, Ft. Pierce, Fla., \$11,915; Hubbard Construction Co., Orlando, Fla., \$13,997;

**Sarasota County—State Project, Job No. 1713-101, Ringling Art Museum Connection**; work consists of reworking ex-

(Continued on page 13)

## Caldwell Named Manager of Atlanta Branch

G. V. Leece, vice president and general sales manager of Gardner-Denver Company, has announced appointment of Robert G. Caldwell as district manager of the company's branch office at Atlanta, Georgia.



R. G. Caldwell

Mr. Caldwell succeeds H. G. Little, former district manager of the Atlanta Branch, and a member of the Gardner-Denver Co. since 1935. Mr. Little has bought an interest in the Central Machinery Co., of Miami, Florida, a Gardner-Denver distributor.

The new district manager, Mr. Caldwell, has a wide acquaintance among Southern business men. He has been associated with the Gardner-Denver Co. for the past twelve years, ten years as a salesman at the Houston branch office and, for the past two years, as resident salesman with headquarters at Corpus Christi, Texas.

Mr. Caldwell, 38, obtained his education at Northwestern University. He is a member of the American Institute of Mining and Metallurgical Engineers, and his fraternal organizations are A.F. & A.M. and Sigma Nu. Mr. Caldwell and his wife, Florence Hall Caldwell, have two children, Robert, Jr., and Carolyn.

Gardner-Denver Co. manufactures pumps, air compressors, rock drills and other pneumatic products which are widely used by industry, mining and construction.

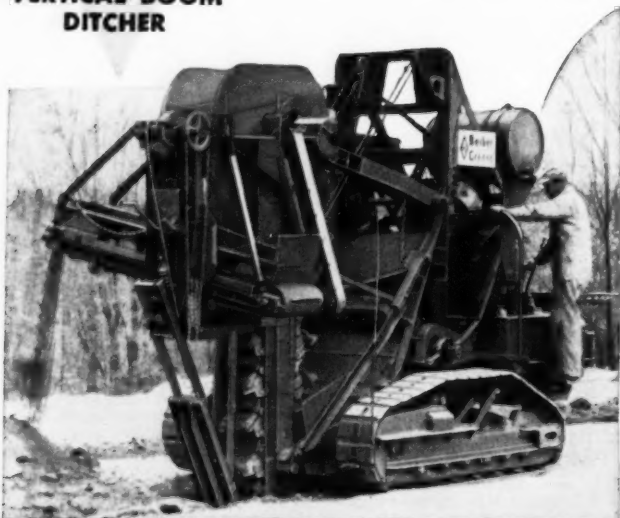
# BARBER-GREENE **HEAVY DUTY DITCHER**

MODEL

## 44-C

**VERTICAL BOOM  
DITCHER**

**for lowest cost per foot of trench  
in all weather**



**SAVE ON JOBS  
LIKE THESE:**

Highway Widening  
Sewer, Water and Gas  
Distribution  
Pipe Line Construction  
Airport Drainage  
Uncovering Joints  
Placing Conduit Tile  
Building Foundations  
Farm Tiling  
Grave Digging

**DIGS CLEAN...** leaves vertical walls... square cuts... eliminates most expensive handwork.

**MILLING ACTION...** closely spaced buckets pare small increments as a milling machine cuts metal.

**OVERLOAD RELEASE...** slips when overload occurs... automatically re-sets itself... no down time for replacing shear bolts, etc.

Only Barber-Greene offers so many proved ditcher advantages to save time and money on all trenching operations. For instance, the Vertical Boom means a compact, easily maneuvered machine: digs straight down, right up to walls, foundations, underground pipes, etc. . . . digs all the ditch . . . no expensive handwork required. The Vertical Boom stays down—the harder the digging, the harder the buckets hold it down. Cuts trench to 8'-3" depth, 24" wide.

Self-cleaning "kick-out" buckets operate in a vertical plane . . . produce the famous B-G mill-

ing action that cuts through coral, frozen ground, caliche and other formations that completely stop other ditchers.

Another time- and money-saving feature is the exclusive B-G overload release that slips on overload and automatically resets itself until the obstruction is removed or the operator stops machine—and then it re-sets itself for continued operation, protecting machine, hidden mains, cables, etc.

Plan to put the advantages of the B-G Model 44-C to work for you.

**You can depend on your Barber-Greene distributor:**

**J. D. Pittman Tractor Co.**  
Birmingham, Decatur and Tuscaloosa, Ala.

**Square Deal Machinery & Supply Co.**  
Orlando, Fla.

**Burton Franklin Co.**  
Chattanooga, Tenn.

**Burford-Toothaker Tractor Co.**  
Montgomery and Mobile, Ala.

**R. S. Armstrong & Bro. Co. of Albany**  
Albany, Ga.

**Priester Machinery Company**  
Memphis 5, Tenn.

**Graze-Dempsey, Inc.**  
Jacksonville 5, Fla.

**Yancey Bros. Co.**  
Atlanta and Augusta, Ga.

**Wilson-Weesner-Wilkinson Co.**  
Nashville and Knoxville, Tenn.

## \$4,231,800 in Road Bids Received by Florida

(Continued from page 11)

isting base, paving and incidental items; three lowest bidders: Cone Brothers Contracting Co., Tampa, Fla., \$21,617; W. L. Cobb Construction Co., Tampa, Fla., \$22,997; J. W. Conner & Sons, Inc., Tampa, Fla., \$23,177;

**Sumter County**—State Project, Job No. 1851-152, State Road No. S-466, from SR 35 east to Lake County line; work consists of paving and incidental items; three lowest bidders: Marion Construction Co., Ocala, Fla., \$44,492; W. L. Cobb Construction Co., \$51,807; J. D. Manly Construction Co., Leesburg, Fla., \$33,074;

**Alachua County**—State Project, Job No. 2618-112, Roads at Florida Farm Colony; work consists of paving and incidental items; three lowest bidders: S. M. Wall, Gainesville, Fla., \$19,583; James H. Craggs Construction Co., \$22,971; Cone Brothers Contracting Co., Tampa, Fla., \$24,891;

**Alachua County**—State Project, Job No. 2618-113, Roads at University of Florida; work consists of paving and incidental items; three lowest bidders: S. M. Wall, Gainesville, Fla., \$59,093; James H. Craggs Construction Co., Ocala, Fla., \$65,906; A. F. Rich Co., Tallahassee, Fla., \$71,376;

**Hamilton County**—State Project, Job No. 3209-103, Stephen C. Foster Memorial Drives; work consists of grading; paving and incidental items; three lowest bidders: Cone Brothers Contracting Co., Tampa, Fla., \$49,452; W. L. Cobb Construction Co., Tampa, Fla., \$53,283; Jaxon Construction Co., Jacksonville, Fla., \$54,169;

**Marion County**—State Project, Job No. 3607-107, State Road No. 500, Marion County on Lincoln Avenue from SR 25 in Ocala approximately 1.811 miles west; work consists of grading; paving, storm drain and incidental items; three lowest bidders: Marion Construction Co., Ocala, Fla., \$194,483; H. E. Wolfe Construction Co., St. Augustine, Fla., \$203,093; W. L. Cobb Construction Co., Tampa, Fla., \$206,789;

**Taylor County**—State Project, Job No. 3809-107, State Road No. 30, Taylor County, from Blue Springs to Hampton Springs; work consists of grading; paving structures and incidental items; three lowest bidders: James H. Craggs Construction Co., Ocala, Fla., \$398,721; Cone Brothers Contracting Co., Tampa, Fla., \$412,057; S. M. Wall, Gainesville, Fla., \$412,366;

**Bay County**—State Project, Job No. 4602-122, State Road No. 30, from Harrison Avenue to Sherman Avenue in Panama City; work consists of surfacing; three lowest bidders: Smith Engineering & Contracting Co., Pensacola, Fla., \$39,296; Georgia-Alabama Paving, Columbus, Ga., \$39,789; Doyle Pope, Quincy, Fla., \$49,697;

**Bay County**—State Project, Job No. 4602-123, State Road No. 30, from east end of Hathaway Bridge to intersection of SR 30-A; work consists of paving; storm sewer and incidental items; three lowest bidders: Doyle Pope, Quincy,

Fla., \$227,615; Smith Engineering & Construction Co., Pensacola, Fla., \$228,702; Florida Asphalt Paving Co., \$232,571;

**Gulf County**—State Project, Job No. 5106-101, Monument Avenue in Port St. Joe; work consists of paving, small drainage structure and incidental items; three lowest bidders: George C. Tapper Company, Inc., Port St. Joe, Fla., \$88,681; Doyle Pope, Quincy, Fla., \$98,217; Faulk & Coleman Construction Co., Tallahassee, Fla., \$99,137;

**Liberty County**—State Project, Job No. 5651-152, State Road No. S-379, from approximately 2.50 miles southwest of Orange to southwest approximately 4.00 miles; work consists of grading; paving; and incidental items; three lowest bid-

ders: R. H. Strickland, Quincy, Fla., \$68,957; W. M. Booser Construction Co., Marianna, Fla., \$72,021; Coggin & Deermont, Chipley, Fla., \$74,197;

**Liberty County**—State Project, Job No. 5652-150, State Road No. S-267, bridge and approaches across Big Creek south of Hosford; work consists of constructing a concrete deck on timber piling bridge 120 feet long and grading; three lowest bidders: Peterson & Earnhart, Tallahassee, Fla., \$23,982; Faulk & Coleman Construction Co., Tallahassee, Fla., \$26,576; Coggin & Deermont, Chipley, Fla., \$26,652;

**Brevard County**—State Project, Job No. 7053-150, State Road No. S-503 from

(Continued on page 14)



## KOEHRING 1005 EXCAVATOR

PROVED PROFITABLE IN THE FIELD . . .

Today's big 1005 is the result of over 25 years of constant KOEHRING engineering development and manufacturing experience in the excavator field. Its many exclusive design features, operating advantages and rugged heavy-duty construction have been thoroughly field tested in the toughest rock service. Like all other excavators in the KOEHRING line, the 1005 delivers steady dependable performance under the most punishing job conditions. You'll find it the modern, lowest-cost answer on your work.

For Complete Information, Contact

### CONSTRUCTION EQUIPMENT COMPANY

2921—2nd Ave. South, Birmingham, Ala.

Phone 54-3418

## \$4,231,800 in Bids Received by Florida

(Continued from page 13)

Clear Lake Road east and northeast to SR 5 in Cocoa; work consists of grading; paving and incidental items; three lowest bidders: Hubbard Construction Co., Orlando, Fla., \$30,842; L. L. Hall Construction Co., Orange Park, Fla., \$31,563; W. L. Cobb Construction Co., Tampa, Fla., \$36,170.

**Duval County**—State Project, Job Nos. 7250-154, 7250-155, 7250-156 and 7250-157, roads southeast of Jacksonville, on Hunter from Patton Drive approximately 200 mile, on Bedford Road from Hunter Road approximately 0.492 mile on Dean Road from Terry Road to Hogan Road and on Emerson Street from St. Augustine Road to Phillips Highway; work consists of paving and incidental items; three lowest bidders: Caddell & Jackson, Jacksonville, Fla., \$31,734; The Duval Engineering and Contracting Co., Jacksonville, Fla., \$31,958; Glen G. Searing Co., Jacksonville, Fla., \$33,523.

**Duval County**—State Project, Job No. 7266-101, State Road No. 13A, on San Jose Boulevard from Hendricks Avenue south approximately 0.900 mile; work consists of widening and paving; lowest bidders: The Duval Engineering & Contracting Co., Jacksonville, Fla., \$21,239; Jaxon Construction Co., Jacksonville, Fla., \$22,384.

**Nassau County**—State Project, Job No. 7454-150, State Road No. S-108, from SR 200 north approximately 5.262 miles;

work consists of grading; paving; drainage structures and incidental items; three lowest bidders: Robert D. Yancey, Ocala, Fla., \$95,773; Caddell & Jackson, Jacksonville, Fla., \$98,865; L. L. Hall Construction Co., Orange Park, Fla., \$104,738.

**Putnam County**—State Project, Job No. 7659-950, State Road No. S-309, from SR 100 north to the Clay County line; State Project, Job No. 7659-951, State Road No. S-309, from Francis north to SR 100. State Project Job No. 7652-950, State Road No. S-309, from Fruitland north to Welaka; work consists of surfacing; three lowest bidders: S. M. Wall, Gainesville, Fla., \$29,597; Campbell Paving Co., \$29,599; Burton Walker Contracting Co., Plant City, Fla., \$29,825.

**St. Johns County**—State Project, Job No. 7809-105, State Road No. 206, from SR A-1A west and southwest approximately 8.078 miles; work consists of paving and incidental items; three lowest bidders: W. L. Cobb Construction Co., Tampa, Fla., \$71,716; L. L. Hall Construction Co., Orange Park, Fla., \$74,045; Ewell Engineering & Contracting Co., Lakeland, Fla., \$77,444.

**Broward County**—State Project, Job No. 8614-104, Pompano State Farmers Market Roads; work consists of paving and incidental items; three lowest bidders: C. T. Stockton, Inc., Miami, Fla., \$9,376; R. H. Wright & Son, Inc., Ft. Lauderdale, Fla., \$9,878; Troup Brothers,

Inc., Miami, Fla., \$10,943.

**Broward County**—State Project, Job No. 8651-150, State Road No. S-820, from SR 823 west approximately 3.380 miles; work consists of paving and incidental items; three lowest bidders: Ronlee, Inc., \$52,216; Brinson Construction Co., Tampa, Fla., \$54,972; Finley P. Smith, Ft. Lauderdale, Fla., \$56,692.

**Broward County**—State Project, Job No. 8653-150, Cypress Creek Road, from SR 811 west approximately 1.438 miles; work consists of surfacing; three lowest bidders: Troup Brothers, Inc., Miami, Fla., \$4,990; C. T. Stockton, Inc., Miami, Fla., \$5,658; R. H. Wright & Son, Inc., Ft. Lauderdale, Fla., \$5,713.

**Dade County**—State Project, Job No. 8720-104, State Farmers Market at Florida City; work consists of paving and incidental items; three lowest bidders: The Brewer Company of Florida, Inc., Miami, Fla., \$27,195; Troup Brothers, Inc., \$27,531; E. E. Collins Contracting Co., \$29,895.

**Dade County**—State Project, Job No. 8755-150, State Road No. S-5-A, from N.E. 2nd Avenue near Miami Shores to Biscayne Canal and on West Dixie Highway from N.E. 135th Street in North Miami to Golden Glades Drive in North Miami Beach; work consists of paving and incidental items; three lowest bidders: C. T. Stockton, Inc., Miami, Fla., \$129,474; Troup Brothers, Inc., Miami, Fla., \$134,351; Polk Construction Co., Lakeland, Fla., \$139,904.

(Continued on page 18K)



## Year After Year The BUSIEST TRUCKS in Highway Fleets!

Wherever the haul, whatever the job FWD four-wheel-drive power and traction are more reliable under every road and weather condition. And because FWD's get more work done per day—more days per year—in scores of highway hauling, maintenance, ice and snow removal, operating costs are cut to a minimum. These FWD performance advantages add up to more finished work per highway dollar.

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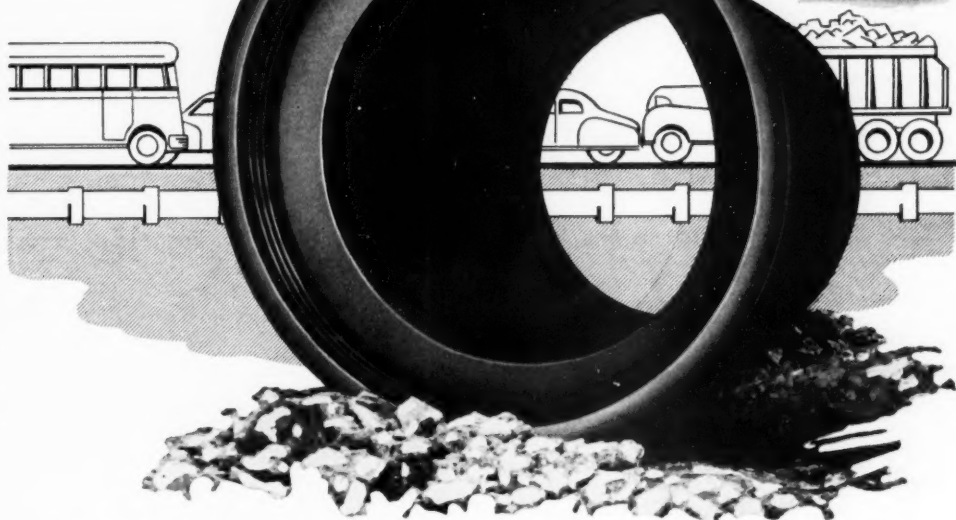
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# CLAY PIPE

*holds its shape*



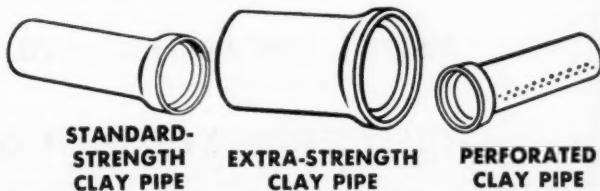
**O**CONEE vitrified clay pipe is formed from natural age old clay—fused at high temperature by means of a spectacular process called vitrification. Clay Pipe is a permanent, heat-bonded material that will NEVER wear out. Vitrification means that OCONEE Clay Products are acid-proof, rust-proof, do not crumble and will not disintegrate.

Contractors know that OCONEE salt-glazed vitrified clay pipe, when specified by construction engineers, is uniform, smooth, easy to handle, promptly delivered and available in ASTM sizes and specifications—Plus OCONEE vitrified Clay Fittings for all requirements. USE OCONEE CLAY PRODUCTS.

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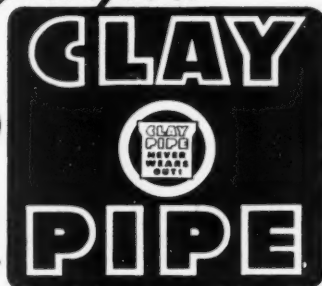
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**STANDARD-  
STRENGTH  
CLAY PIPE**

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CLAY PIPE**

**PERFORATED  
CLAY PIPE**



C-630-6

# ENGINES WITH EXPERIENCE

Backing your "Caterpillar" Diesel Engines are more than 21 years of Diesel engine experience—experience in design, in manufacture, in field operation, in dealer service—experience that has made it possible for scores of "Caterpillar" Diesel Engines to turn in records of 50,000, 75,000, even 100,000 working hours. At the same time these engines have established outstanding records for day-after-day performance with a minimum of downtime.

Working in crushing plants, shovels, draglines, compressors and other types of construction equipment, these "Cat" Diesels are conservatively rated to give you *usable* horsepower that is matched to the capacity and performance of your powered equipment. They are equipped with fuel and lube oil filters, highly efficient air cleaners and breathers and effective dust seals that keep maintenance and repair costs to a minimum. They are available with a wide variety of attachments that readily adapts them to your specific power needs.

Available in twelve sizes to 500 HP, there is a size to match your power needs, whether it is in new equipment or for repowering equipment you now own. So stop by and let us recommend the type and size power units you need—let us engineer your installations—let us back these installations with the tops in "Caterpillar" Dealer parts and service facilities.

*3350 tons of 3" rock are turned out in an average 8-hour day by this "Cat" D17000 powered crushing plant. The unit operates 26 days per month, 9 months a year, in spite of dusty conditions and extremes in heat and cold. Here is durability measured in tough field conditions—an example of "Caterpillar" quality that comes from experience.*



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## 21 YEARS OF EXPERIENCE



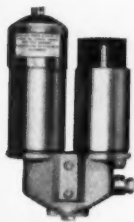
in Diesel engine design stand behind the "Cat" Diesel fuel-injection system... your assurance of satisfaction. "Cat" Engines burn low-cost fuels efficiently without fouling.

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—"Cat" precision-type aluminum alloy main and connecting rod bearings are time-proved, job-tested in thousands of hours of heaviest duty. One of many "Cat" features that assures steady performance with a minimum of downtime.

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proves the extra quality of "Cat" full-flow lube oil systems. All oil that goes to the engine must pass through special filters that remove abrasive materials... but not detergents. Assure longer engine life.

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**LOOK TO THE  
DEALER BEHIND  
THE PRODUCT**

*A "Cat" D13000 powers a pump on this levee project in the Everglades. Two other D13000s and a D17000 are also working on this job of Hooper Construction Co., Coral Gables, Florida.*



## Georgia Road Bids Total \$3,028,509

Low bids received in September by the Georgia State Highway Department totaled \$3,028,509. Projects included the following:

Houston and Bibb — Access Defense Project No. AD-1 (1) CT. 1, 11,219 miles of grading and paving on access road to Robins Air Force Base; work consists of constructing two additional traffic lanes, generally parallel to existing S.R. 247, the Hawkinsville to Macon Road; begins at Robins Air Force Base and extends toward Macon to intersection of U.S. Route 41, E. M. Beckham Construction Co., Perry, Ga., \$689,343;

Houston and Bibb — Access Defense Project No. AD-1 (1) CT. 2, five bridges on Robins Air Force Base to Macon Road; structures include two bridges over Echeconnee Creek, one bridge over G. S. & F. Railroad. One bridge over C. of G. R. R., and one grade separation structure, H. G. Smith, Fitzgerald, Ga., \$257,445;

Dougherty — Access Defense Project No. AD-2, 7,012 miles of grading and paving on Marine Depot Road, S.R. 257 to S.R. 50; begins at intersection with S.R. 257 approximately 1.9 miles south of S.R. 50 and extends east to connect with S.R. 50 approximately 9 miles east of Albany, Wright Contracting Co., Columbus, Ga., \$219,186;

Richmond — Federal Aid Project No. U-015-1 (1), 2,591 miles of grading on Augusta to Waynesboro Road; begins in

Augusta at point on Fifth St. near Hale St. and extends southwest on relocation to intersection of S.R. 21 and 56, Weese and Weeks Construction Co., McCaysville, Ga., \$369,238;

Monroe — Federal Aid Project No. F-037-1 (2) CT. 1, 4,982 miles of grading and paving on Macon-Jackson Road, S.R. 87; begins at Bibb County Line and extends north to intersection with S.R. 18 near Dames Ferry, E. A. Hudson's Sons, Bolton, Ga., \$292,001;

Dooly — Federal Aid Project No. F-081-1 (3), 3,503 miles of grading and paving on Americus-Vienna Road, S.R. 27; begins at end of present pavement west of Vienna and extends toward Americus, E. A. Hudson's Sons, Bolton, Ga., \$81,934;

Early and Clay — Federal Aid Secondary Project No. S-0508 (4) CT. 8, two bridges located at Colomokee Creek and Roaring Branch on Blakely-Fort Gaines Road, State Route 39, Leo T. Barber, Moultrie, Ga., \$106,000;

Stewart — Federal Aid Secondary Project No. S-0510 (3) CT. 1 and S-1520 (1) CT. 1, 7,756 miles of grading and paving on Lumpkin-Benevolence Road, begins at Courthouse Square in Lumpkin and extends toward Benevolence, T. D. Lamb, Jr., Vidalia, Ga., \$152,122;

Wilcox — Federal Aid Secondary Project No. S-0539 (4), 5,615 miles of grading, paving and two bridges on Rochelle-Fitzgerald road, S.R. 215; begins at end of

present pavement southeast of Rochelle and ends north of Ben Hill County line, M. J. Carroll Contracting Co., Leesburg, Fla., \$84,059;

Bryan — Federal Aid Secondary Project No. S-0630 (1), 7,647 miles of grading and paving on Richmond Hill-Keller Road, S.R. 63; begins at end of present pavement at the S. A. L. Railroad in Richmond Hill and extends to Keller, Marion Construction Co., Ocala, Fla., \$97,952;

Lamar — Federal Aid Secondary Project No. S-0762 (7), 5,280 miles of grading and paving and one bridge on Barnesville-Jackson Road, S.R. 36; begins approximately 3.5 miles north of Barnesville and extends toward Jackson, E. A. Hudson's Sons, Bolton, Ga., \$137,520;

Rabun — State Aid Project No. PR-1203 (1), 3,342 miles of grading and paving on Black Rock Mountain State Park Road. Begins at Black Rock Mountain St. Park and extends northeast to intersection of S.R. 15 (U.S. Rt. 23) in Mountain City; all bids rejected.

Seminole — State Aid Project No. SAP-1247-A (4), bridge over Fish Pond Drain on S.R. 285 (S.R. 39 to Brinson Road), Leo T. Barber, Moultrie, Ga., \$21,000;

Richmond — State Aid Project No. SAP-1284 (1), grading, paving and constructing scale house and scale pit at State Farmers Market located at Fifth and Gwinnett Streets in Augusta, Southern Roadbuilders, Inc., Augusta, Ga., \$60,768;

Johnson — State Aid Project No. PR-

(Continued on page 18D)

ALLIS-CHALMERS MODEL D TANDEM DRIVE GRADER



This Allis-Chalmers Model D keeps right on working without slowing down log hauls. Trucks can move past without requiring the grader to stop its work and pull off the road.

The Model D is tailor-made for logging road maintenance . . . yet costs only one-third as much as large graders. Sure-footed tandem drive provides better traction, easier riding, smoother blading . . . and it's exclusive with the Model D in this power class. It's compact design makes it highly maneuverable . . . can turn in amazingly short radius.

With hydraulically controlled rear-end loader, scarifier, snowplow and windrow eliminator, it can handle a variety of jobs the year around at real savings.

WEIGHT: 8,500 lb. (bare)  
BRAKE HP.: 34.7 (famous Allis-Chalmers gasoline engine)  
SPEEDS: 4 forward to 18.6 mph.; reverse to 2.9

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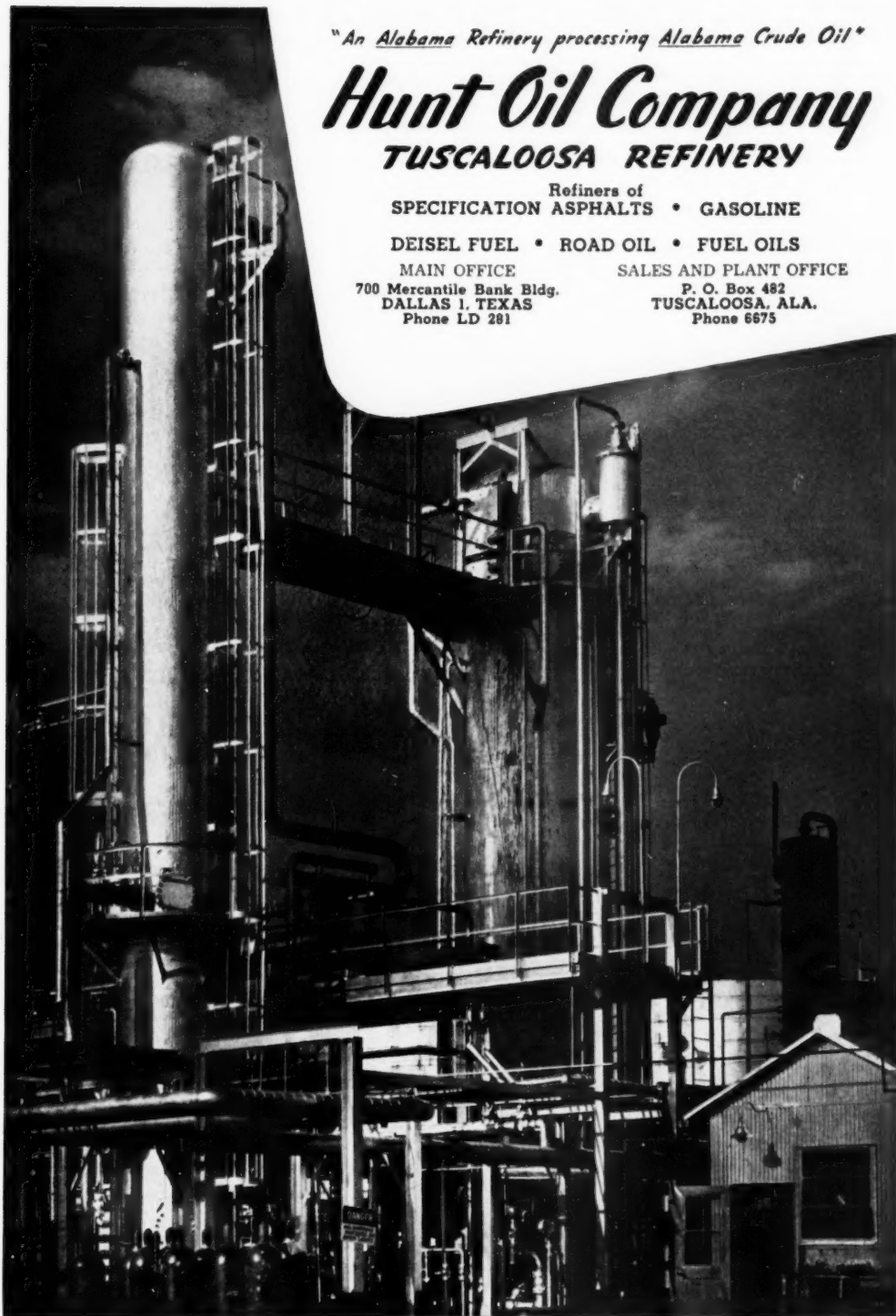
## **TUSCALOOSA REFINERY**

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## Contractors Protest Separate Award Bill

Georgia general contractors have registered their opposition to the bill proposing award of separate contracts now before the legislature in that state.

Attacking the proposal as "a good illustration of a minority group in the construction industry attempting to regulate, or change time proven methods in the industry for its own benefit by legislation," Robert H. Strickland presented the protest as a representative of the Georgia branch of the Associated General Contractors of America.

No contractors should be required by law to do business with any one of several subcontractors, not of his own choosing, any more than a man should be required by law to work for any other man.

"If the purpose of the proposed legislation, as has been stated, is to eliminate 'bid-shopping,'" Mr. Strickland declared, "it will not do so, for more often than not, it is the subcontractor who approaches the general contractor with a proposal to change his bid, both before and after the announcement of the successful low general bidder.

"The negotiations are free and voluntary, they are a part of the free enterprise system, and not to be considered an evil practice any more than the shopping of an individual for a better price. This freedom of negotiation has permitted many business ventures to go ahead, thereby creating work and prosperity, where otherwise a project might be

stilled due to a prohibitive cost.

"It is a commonly known fact that no general contractor ever 'shopped' a bid without the active encouragement of some subcontractor. It would appear that the mechanical specialty subcontractors desire a law to protect themselves from accepting a contract at a price lower than their original bid, or to protect themselves from offering to do the work at a price lower than they had originally estimated.

"No subcontractor is required to accept a job unless he desires to do so. He is free to refuse or to accept any offer if one is made by a general contractor, and he also should be free to make an alternate proposal after he has learned who is to be the general contractor and how the work will be managed and coordinated.

"It is an admitted fact by many subcontractors that they can work cheaper under the experienced supervision of skillful general contractors with the technical 'know-how' to coordinate the whole job. Any general contractor or subcontractor who permits a buyer to determine his price and persuade him to accept it against his better judgment, should not be in business."

### Knoxville Engineer Named

Rufe B. Newman, a Knoxville engineer, has been designated acting assistant administrator for facilities and construc-

tion of the National Production Authority, U. S. Department of Commerce.

Born in Chattanooga, Tenn., in 1892, Mr. Newman long active in the construction business in Tennessee and Florida, for three years was in charge of engineering and surveys dealing with land acquisition for the Great Smoky Mountains Association.

In 1933 he joined the Tennessee state office of the Public Works Administration and later became chief project engineer in Chattanooga, supervising 22 large power projects in the Tennessee Valley, and finally Assistant Director for PWA in the Southeastern States.

After service in the War Department's Munitions Plants and Depot Section, he became chief of the construction section, Division of Defense Housing, Federal Works Agency, in June 1941. He became Deputy Commissioner for Engineering and Construction in PWA's Bureau of Community Facilities in 1945.

Mr. Newman, a licensed engineer of the States of Tennessee and Florida, is a member of the U. S. Civil Service Commission Committee of Expert Examiners, The American Society of Civil Engineers, and the Florida Engineering Society. He is married and has one son, a civil engineer in Florida. Mr. Newman's home is in Knoxville, Tennessee.

### George C. Wilder Elected

A special session of the board of directors of Macwhyte Co., Kenosha, Wisc., wire rope manufacturers, elected George C. Wilder president and director.



## CONCRETE PIPE IN ALL SIZES

*The only permanent Drainage*

**Sewers**

**Drainage**

**Culverts**

**Special Pipes**

**"Your Drainage Problems are Our Business"**

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**PIPE  
COMPANY  
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**ALABAMA** — P. O. Box 1767, BIRMINGHAM; Shearman Concrete Pipe Co., Inc., P. O. Box 1162, MONTGOMERY — **FLORIDA** — P. O. Box 2348, JACKSONVILLE; 602 S. Fremont Ave., TAMPA; P. O. Box 105, TALLAHASSEE; P. O. Box 659, SANFORD — **GEORGIA** — P. O. Box 3, DECATUR — **TENNESSEE** — Huron St. & Southern Ry., KNOXVILLE; 2400 Heiman St., NASHVILLE; 1111 Oak Street, CHATTANOOGA; Love Street, JOHNSON CITY.

# BID the Smaller Jobs, Too!



"Cat" DW21 making complete turn on this 28-ft. road!

**S**ome people think that because the "Cat" DW21 is such a big dirtmover you can't maneuver it like you could a smaller machine. There are those who say that DW21's are suitable only for the bigger jobs, like airports or super-highways.

Here's proof that this just isn't so! The DW21's shown here are building a 28-ft. road in Troup County. They have just finished working on Atlanta's Expressway for Hugh Steele Construction Co.

On this job, which called for widening and relocating 6½ miles of Ga. Route 219, they averaged 6,000 yards per day with their DW21's. The only other dirtmovers on the job were a "Cat" No. 12 Motor Grader, a D6 with 8-yd. scraper, two "Cat" Bulldozers and a pusher tractor. Their yardage figures compare very favorably with the big, wide Expressway job, where they averaged only 2,000 yards per day more!

You needn't be afraid of bidding smaller jobs with DW21's. Like all "Caterpillar" earthmoving machinery they are built to make more money for you.

Let us demonstrate a DW21 on your job today!



Returning from the fill—speed and power of DW21's reduce haul time, boost yardage.

## Yancey Bros. co.

Phone EL-3741  
1540 Northside Drive  
ATLANTA, GA.



Phone 3-2241  
1781 Fifteenth St.  
AUGUSTA, GA.

**"Caterpillar"**

• Sales  
• Service  
• Repairs

## D.P.A. Authorizes Uranium Project

Approval given the International Minerals and Chemical Corp. to produce uranium in Polk county, Florida, and to establish facilities for that purpose to cost approximately \$800,000 was among a series of clearances of facility expansions granted in the Southeast by the Defense Production Administration.

The approvals, issued for tax amortization purposes in the form of certificates of necessity, represented a planned expenditure of \$32,166,262 in the area, including the proposed power distribution program of General Electric Co. in Rome, Ga., to cost \$24,337,875, which was announced recently from Washington.

Phosphatic fertilizers, elemental phosphorous and dicalcium phosphate were among the products included in other D. P. A. approvals.

According to Merrill C. Lofton, regional director of the U. S. Department of Commerce, D. P. A. simultaneously announced programs for the expansion of the cotton compress industry and the production of additional supplies of phosphatic fertilizers and phosphatic feed supplements, and phosphate rock to meet the needs of the nation in its defense program, which means, it was stated, that careful consideration will be given applications for certificates of necessity for the establishment of additional facilities for those purposes.

The D. P. A. cotton compress goal has been set at the number of compresses

deemed necessary to handle an additional 1,300,000 bales of cotton, representing the increase over the compressing facilities available for the 1949 cotton crop. The added capacity is needed for certain areas which do not now have sufficient compressing capacity for their anticipated cotton production, it was stated. A substantial portion of the goal is still open for issuance of the certificates of necessity for that purpose, D. P. A. said.

The goal for annual supply of phosphatic fertilizers for domestic use and exports has been set at 3,600,000 short tons in terms of available phosphorus pentoxide, by July 1, 1954, representing an increase in domestic production of 1,400,000 tons over production of about 2,150,000 tons in fiscal year 1951.

Other DPA certificates just issued included:

Virginia-Carolina Chemical Corp., Nichols, Fla., phosphatic fertilizers, \$4,500,000; New Orleans and Northeastern Railroad, Barnett, Miss., railway transportation, \$7,150; Southern Railway, Norris, S. C., railway transportation, \$22,585; New Orleans and Northeastern Railroad, Sandersville, Miss., railway transportation, \$8,245; Southern Railway, Austell, Ga., railway transportation, \$54,193; and Shea Chemical Corp., Columbia, Tenn., elemental phosphorus and dicalcium phosphate, two certificates for \$2,054,530 and \$381,684, respectively.

## Georgia Highway Bids Total \$3,028,509

(Continued from page 18)

1312 (3), bridge over Cedar Creek on State Route 15 to Donovan Road, Harry Brown, Milledgeville, Ga., \$14,391;

Colquitt and North—Federal Aid Secondary Project No. S-1615 (1), 7.110 miles of grading and paving on Norman Park-Sylvester Road, S.R. 256, begins at intersection with S.R. 35, north of Norman Park and extends north toward Sylvester, E. F. Groover, Moultrie, Ga., \$121,372;

Fulton—State Aid Project No. SAP-RECON-1681-A (12), 6.208 miles of resurfacing, on Roswell to Atlanta Road, S.R. 9, including widening and reconstruction of curves; begins at Chattahoochee River bridge and extends toward Atlanta, ending at Hilderbrand Drive in Sandy Springs, MacDougald-Warren, Inc., Atlanta, Ga., \$207,979;

Glynn—State Aid Project No. SAP-RECON-1791-A (7), repairs to bridge over South Brunswick River on S.R. 25; approximately five miles south of Brunswick, H. M. Pafford, Jr., Waycross, Ga., \$64,834;

Harris State Aid Project No. SAP-1809-A (4), removing slides on Chipley-Hamilton Road, (S.R. 1); work consists of removing slides and providing drainage on section of road approximately 600 feet in length, located 300 feet south of the Central of Georgia R.R. overhead bridge, Americus Engineering & Construction Co., Americus, Ga., \$41,358.



**UNIVERSAL CONCRETE PIPE CO., ALA.:** Decatur, Dothan, Florence. **FLA.:** Miami, Ocala (Florida Concrete Pipe Co.), St. Petersburg, Tallahassee and Tampa. **GA.:** Atlanta. **TENN.:** Nashville.

## READ WHAT... Chester Parks... Says

"These three tractors handled an average of 1000 yards per hour of fill material under most difficult conditions with exceptional performance and ease of operation."



Above, 3 Allis Chalmers HD 15 tractors do their share toward speeding completion of the new Florida cross-state highway (U.S. 50). Superintendent Chester Parks, Polk Construction Company of Lakeland, directs the fill work in which as much as 10,000 yards of earth were put down daily.

The **RIGHT**  
Machinery for  
the Job...



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**\$19,000**

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and towbar

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# TOURNATRACTOR

## rubber-tired pusher model of job-proved Tornadoizer

• Speeds to 19 m.p.h. forward for quick moves in the cut or from one cut to another, plus fast emergency towing or pulling . . . 8 m.p.h. reverse for fast backup, increased speed on pusher duty.

• Drives job-to-job via highway, tracks, or cross-country. Crosses curbs, rails without planking. Eliminates cost and delay of trailer hauling.

• 18.00 x 25 low-pressure tires. Wide-base 65" sand, 21.00 x 25 high-traction tires also available.

• 186 h.p. heavy-duty diesel engine.

• Constant-mesh transmission . . . optional torque converter automatically synchronizes pusher speed to scraper speed, eliminates shock load between final drive and engine.

• 4-wheel drive . . . pushing thrust taken by all 4 wheels . . . more traction.

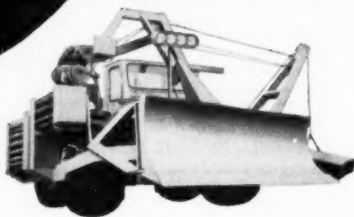
• 4-wheel disc-type air brakes . . . 2822 sq. in. total braking surface.

• Fingertip electric steer and shift . . . instant gear changes, fast positioning.

• Steel bumper 3" thick, 15" high across entire width of rig . . . all-steel, welded pusher plate.

• Tournatractor is easily converted to Tornadoizer with addition of A-frame, bulldozer blade. Double-drum PCU, down-pressure attachment, tilt mechanism, cab, winch, etc. also available.

## Auxiliary Tournatractor tools assure steady earnings year-round

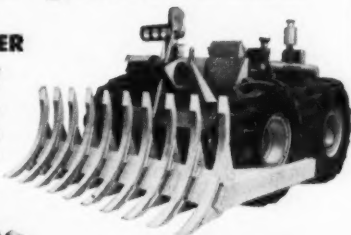
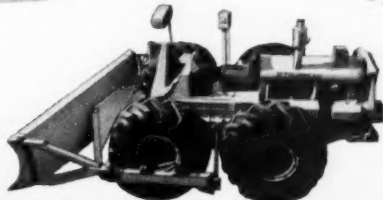


### Side-Boom CRANE

Lifts 14 tons to maximum 12' height . . . 5 tons at maximum 12' reach. Fingertip electric controlled, with power up and down. Maneuvers, spots "on a dime". Works, travels anywhere, carries full load over pavement, through mud.

### BULLDOZER-ANGLEDZOER

For dozing work, the Tournatractor can be equipped with 13' x 41 1/2" Angledozer or 11'4" x 43" Bulldozer. Angledozer blade can be angled 20° right or left. Both Bulldozer and Angledozer are controlled by an electric motor.



### ROOT RAKE

Low-cost, specialized tool for handling brush clearing. Husky 11'4" x 54" rake has 10 curved teeth of 4" high-grade, heat-treated steel, placed 10 1/2" apart, for grubbing out roots, piling brush, raking rocks. Lifts loads up to 46".

Tornadoizer, Angledozer - Trademark Reg. U. S. Pat. Off. Tournatractor - Trademark T-192 G. W.

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**Tri-State Equipment Co., Inc.**

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## General Motors Expands at Jacksonville

Plans for trebling the size of the Jacksonville, Florida Branch of Electro-Motive Division of General Motors have been announced by N. C. Diezendorf, vice president of General Motors and general manager of the division at the LaGrange, Ill., headquarters.

The branch is one of six in the United States in which Electro-Motive rebuilds major components of Diesel locomotives such as generators, traction motors, and Diesel engines with factory methods under a new product guarantee. The branches also are replacement parts distribution points.

The present Jacksonville plant occupies 26,880 square feet of floor space.

This will be enlarged to 77,568 square feet. The new addition will be roughly in the form of a U built around the present plant, with a modern office wing stretching across the front.

The southeastern regional offices of Electro-Motive division, recently moved from Washington, D. C., to Jacksonville and now housed in the Atlantic National Bank Building Annex will be located in the new office building at the plant.

Enlargement of the activity will mean an eventual increase of Electro-Motive employment in Jacksonville from 34 to approximately 110 persons. Plans call for completion of the construction next spring.

### Open House Marks Warehouse Finish

Atlantic Steel Company's new warehouse division building is being rushed to completion, and will be ready for occupancy by late October, according to Robert S. Lynch, company president.

Marking the opening of these new facilities, the Warehouse Division will hold a two-day open house and trade show on October 31 and November 1.

The new warehouse building, located at Fourteenth Street and Northside Drive, is adjacent to the West By-Pass and the Southern Railway.

Costing \$500,000, the building is of steel

and brick construction, with the 460 by 140-foot warehouse area on one level.

Mr. Lynch said the modern design and lay-out of the building will permit the most efficient handling and stocking of warehouse products and will assure prompt service to the customer.

Exhibits and displays will be featured during the company's open house and trade show. In addition to the full line of steel warehouse products, visitors will see a wide variety of fabricated metal products produced in the South.

One feature of the show will spotlight the versatility of stainless steel, and its use by some of the major industries. Individual displays, ranging from 32 to 44

feet in length, will be built to exhibit stainless steel equipment used in dairy, textile, and pulp and paper industries. Another display will show the stainless steel utensils and equipment used in hospitals.

A number of Southern metalworking plants and fabricators, using the company's carbon steel and other materials, have been invited to participate in the trade show with exhibits of their products.

Featured also will be displays showing the uses of other materials carried by Atlantic Steel's warehouse division, such as cold drawn steel, expanded metal and copper.

Invitations will be sent to the company's employees, customers and suppliers and to many industrial business and commercial leaders. The open house and trade show will also be open to the general public, and door prizes will be awarded.

An interesting feature of the show will be an indoor playground area for children, completely equipped with slides and swings. Enclosed with chain link fence, it will be supervised by registered nurses.

A Quonset building, for which the company's warehouse division is local distributor, will be erected in the exhibit area, and will serve as a refreshment stand.

Following the open house and trade show, visitors will be afforded the opportunity to see Atlantic Steel company's new 60-ton electric furnace in operation.



Standard shovel with Torque Converter Power Take-off loading from solid face of Pennsylvania slag dump. Doing outstanding work in toughest job is 35 years experience of owner.

## MANITOWOC

SHOVELS  
1-5 YD.

*Speed Crane*

CRANES  
18-100 TON

### The TORQUE CONVERTER makes the difference

#### ● FASTER CYCLES

Highest speed ratio for the load, automatically selected. Speeds increased as much as 25% with complete safety for machine and operator.

#### ● FULL ENGINE POWER

Engine never lugged down below full load speed—Converter boosts torque, increases bail pull, without pulling down engine speed.

#### ● ABSORBS SHOCK

Oil cushion absorbs shock loads ... reduces machine breakage, assures longer parts life and less down time for maintenance.

# GEORGE PARK Tractor Co.

1382 Guy Paine Road, Macon, Ga.  
TELEPHONE 5-2875

## Vacant Houses Rise in Southeast Area

There were 64,000 more vacant dwelling units in 23 southeastern cities in 1950 than there were 10 years ago, the Atlanta regional office of the U. S. Department of Commerce reported last month.

The figures were taken from latest Bureau of the Census returns from its 1950 census of housing and released by Merrill C. Lofton, Commerce Department regional director.

With September 30 of this year set as the final date for rent controls in some areas in the region, the Census Bureau report, while now two years old, became doubly important. The Bureau cautioned, however, that its 1950 figures should not be subjected to a "strict comparison" with those of 1940 because the 1950 census "included a few uninhabitable vacancies which would not have been included according to the 1940 definition."

In the six States of Alabama, Florida, Georgia, Mississippi, South Carolina and Tennessee some 190,000 more vacancies were shown in the 1950 report over the 1940 compilation.

Not all of the vacancies in the States and cities in the region were available, however. In fact, the Bureau's report for 1950 showed a decline of 78,800 "available" vacancies in 1950 as compared with 1940, but in the 23 cities included in Mr. Lofton's report there still was an increase of approximately 11,000 "available" vacancies in 1950 over 10 years previously.

In "total vacancies," including those available and those not available, all of the six States and 23 cities reflected sharp gains in the 10-year period. Alabama went from 34,228 in 1940 to 57,054, Florida, 70,564 to 130,770, Georgia, 44,474 to 77,431, Mississippi, 22,299 to 54,592, South Carolina, 23,931 to 43,046, and Tennessee, 27,135 to 50,378.

Among the cities, Birmingham's total vacancies went from 2,716 in 1940 to 5,829, Mobile, 928 to 4,923, Montgomery, 415 to 2,713, Jacksonville, 1,776 to 5,752, Miami, 14,142 to 26,195, Tampa and St. Petersburg metropolitan area, 11,912 to 21,042, Atlanta, 4,057 to 6,973, Augusta, 999 to 2,607, Columbus, Ga., 429 to 2,097, Macon, 517 to 1,663, Savannah, 1,563 to

(Continued on page 18M)

## CHALLENGE truck mixers are your greatest dollar value



Challenge mixers cost less—weigh less—than other mixers of comparable size. The Challenge 5 yard mixer contains 20 to 24 cubic feet MORE drum space than competitive 4½ yard mixers—almost a full cubic yard more.

**Only Challenge gives you more cubic feet of drum space per dollar.**

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**MINE & CONTRACTORS  
SUPPLY CO. INC.**

**SALES — RENTAL — SERVICE**

930 Second Ave. N. Phones: 34806 & 34271 Birmingham, Ala.



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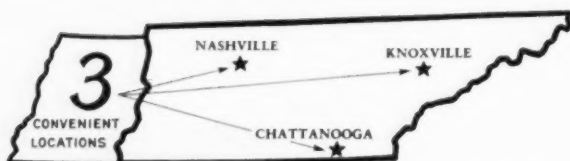
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LORAIN — GARDNER-DENVER**

**And Allied Construction Equipment**

All famous names—backed by the highest type of service. A combination that means more profit and greater satisfaction for you. For prompt, dependable service, call or write

# Nationally Known Equipment

**LeTOURNEAU**  
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MACHINERY DIVISION

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*Construction and  
Industrial Machinery*

### Plant Yates Dedication Slated This Month

Plant Yates, 300,000-kilowatt steam-electric generating station built on the Chattahoochee river between Newnan and Carrollton, by the Georgia Power Co. is scheduled for dedication this month.

E. A. Yates, chairman of the board of directors of The Southern Company, in whose honor the plant is named, will be present for the occasion with other company and local and state government officials.

Construction of Plant Yates, the largest power plant in Georgia, was begun in September, 1948. The plant is being completed in time for the dedication and will cost more than \$32,000,000, according to Harllee Branch, Jr., Georgia Power president.

The three units at Plant Yates, each with a capacity of 100,000 kilowatts, will produce approximately two billion kilowatt hours of electric energy a year, or more than all of the customers of the Georgia Power Company used in 1940. The power generated at Plant Yates is sent out to customers of the company over five 110,000 volt high tension transmission lines that radiate from the plant. Plant Yates is as tall as a 10-story office building and covers an area of approxi-

mately two acres.

Mr. Yates has been a leader in the development of the electric industry in the South for the past 40 years. He joined the Alabama Power Company in 1911 and was named chief engineer. During the next few years he was instrumental in the engineering of the great hydro-electric projects developed in Alabama. Later he was called on to develop plans for the great integrated and inter-connected power system that now exists in the Southeastern states. This system which includes the Georgia, Alabama, Gulf and Mississippi Power Companies has resulted in both operating economies and more efficient electric service for this area.

When The Southern Company, which comprises the above companies, was formed in 1947, Mr. Yates was named its first president and subsequently chairman of the board of directors. Mr. Yates is also a vice president and director of the Georgia Power Company.

### Florida Highway Bids

(Continued from page 14)

**Martin County**—State Project, Job No. 8903-105, State Roads Nos. A-1-A and 707, from SH 5 at Stuart to St. Lucie County

Line; work consists of reworking, widening; paving and incidental items; three lowest bidders: W. L. Cobb Construction Co., Tampa, Fla., \$71,705; Marion Construction Company, Ocala, Fla., \$80,519; Brinson Construction Co., Tampa, Fla., \$83,121;

**Palm Beach County**—State Project, Job No. 9300-116, parking area at State Tubercular Sanatorium Lantana; work consists of paving and incidental items; three lowest bidders: Brinson Construction Co., Tampa, Fla., \$7,011; Troup Brothers, Inc., Miami, \$7,275; Rubin Construction Co., West Palm Beach, Fla., \$7,428;

**Palm Beach County**—State Project, Job No. 9318-106, State Road No. 802, in Lake Worth on Lake Avenue from south A street east to south Federal Highway; work consists of widening; surfacing; and incidental items; three lowest bidders: Rubin Construction Company, West Palm Beach, Fla., \$24,980; Brinson Construction Co., Tampa, Fla., \$27,113; W. L. Cobb Construction Co., Tampa, Fla., \$27,751;

**Palm Beach County**—State Project, Job No. 9327-101, State Road No. 7, from SR 80 north to SR S-704; work consists of grading; paving and incidental items; three lowest bidders: Belcher Oil Co.,

(Continued on page 18M)

## STATHAM MACHINERY & EQUIPMENT CO.

CONTRACTORS EQUIPMENT AND SUPPLIES

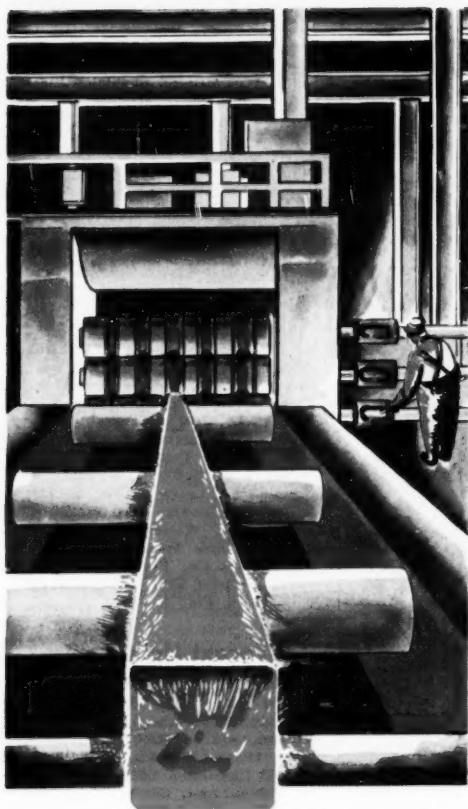
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**CHALLENGE**  
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Thor Rock Drills, Paving Breakers, and  
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Scrapers, Dozers, Power Control Units  
"Terra-Cobra" self propelled  
earthmoving units

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## CONNORS QUALITY Is Being "Expanded," Too



The expansion program at  
**CONNORS STEEL COMPANY**,  
now nearing completion, means  
a 40% increase in production.

While this is important, even  
more so is the fact that **CONNORS'**  
long-recognized Quality also is being "expanded"... This is made  
possible by the addition of new, modern equipment, including  
another electric furnace, another reheating furnace plus an  
additional rolling mill.

New production equipment like this, backed up by other  
improvements in **CONNORS** modern control laboratory, means  
even higher Quality Steel from **CONNORS**: a name long respected  
by users of Quality Steel.



CONCRETE REINFORCING BARS • BARREL  
HOOPS • FENCE POSTS • COTTON TIES

TOBACCO HOOPS • HOT ROLLED STRIP  
HIGHWAY SIGN POSTS • MERCHANT BARS

# CONNORS STEEL COMPANY

DIVISION OF H. K. PORTER COMPANY, INC.  
BIRMINGHAM, ALABAMA





## Puts itself up!

**N**OBODY climbs anything, to erect the tower of the American Portable Material Elevator. The operator just moves a lever on his hoist, and the tower swings up into working position.

If you are still struggling with old-fashioned wooden scaffolds, think about this: the American Portable Material Elevator can be

taken down, moved and set up again in much less than one day. Standard height is 47 feet—10' extensions take it to 97 feet. Big 6' x 6' platform carries the wheelbarrows or concrete buggies; self-dumping concrete bucket carries ½ yard. Platform speed is 90 feet per minute.

For full information see your American Hoist distributor.

Product of AMERICAN HOIST & DERRICK CO., St. Paul 1, Minnesota

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**TRACTOR & MACHINERY CO., Inc.**

470 GLENN ST. S. W.

Phone WALnut 6854

ATLANTA, GEORGIA

## \$4,231,800 in Road Bids Received by Florida

(Continued from page 18K)

Miami, Fla., \$124,596; Brinson Construction Co., Tampa, Fla., \$134,340; R. H. Wright & Son, Inc., Ft. Lauderdale, Fla., \$138,279;

**Palm Beach County**—State Project, Job No. 9369-150, Bridge over West Palm Beach Canal; work consists of constructing a steel I-beam concrete deck bridge 229 feet long with movable span; three lowest bidders: Cleary Brothers Construction Co., West Palm Beach, Fla., \$58,241; Powell Brothers, Inc., Ft. Lauderdale, Fla., \$60,424; Bunnell-Ludwig Corp., Miami Beach, Fla., \$65,470;

**St. Lucie County**—State Project, Job No. 9407-108, State Road No. 68, from a point approximately 1.50 miles west of Fort Pierce City limits east 1.486 miles; work consists of grading; paving and incidental items; three lowest bidders: Brinson Construction Co., Tampa, Fla., \$75,785; W. L. Cobb Construction Co., Tampa, Fla., \$81,969; J. D. Manly Construction Co., Leesburg, Fla., \$85,122;

**Hamilton County**—State Project, Job No. 3201-113, Welcome Station, State Road 25; three lowest bidders: Smith Construction Co., Pensacola, Fla., \$46,985; I. T. Carter, \$50,774; Jack Culpepper, Tallahassee, Fla., \$51,628.

## Vacant Houses Rise

(Continued from page 18J)

3,854, Jackson, Miss., 391 to 2,512, Asheville, 929 to 2,770, Charlotte, 483 to 1,724, Durham, 610 to 808, Greensboro-High Point, 470 to 1,773, Winston-Salem, 1,294 to 1,645, Charleston, 1,679 to 4,260, Columbia, 530 to 2,951, Chattanooga, 1,514 to 2,649, Knoxville, 1,266 to 5,796, Memphis, 2,504 to 4,304, and Nashville, 2,487 to 2,843.

An entirely different story prevailed, however, with regard to dwelling units in the region that were classified as "available vacant" by the Census Bureau. In the 10-year period an actual decrease took place Statewide in all instances, and in several cities a decline occurred. Particularly was this true in Atlanta where the number of "available vacancies" in 1940 was listed as 3,817, and in 1950 there were only 3,574.

## CRUSHED GRANITE

### Tyrone Rock Products Company

Room 236  
87 Haynes  
Street N. W.  
Atlanta, Ga.

Class "A" aggregate for bituminous and concrete construction. Washed, screened and sized to meet your project specifications. Washed granite sand for concrete products.

"CALL ON TYRONE"  
Alpine 4802  
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J. FRANCIS WILKERSON  
Sales Manager

Plant  
Tyrone  
Georgia



Above—Aerial view of the western end of Armco Steel Corporation's plant at Ashland, Ky., where \$35,000,000 is being spent for expansion. The new hot strip mill is located to the right of the reservoir. New office buildings, gatehouse and a corner of the parking lot are shown in the middle foreground.

## \$4,646,295,000 Awards in Nine Months

**S**OUTHERN construction in the first nine months has mounted to \$4,645,295,000, a figure within one per cent of the level established in the comparable period of last year. September's contribution was \$226,709,000.

Three of the five types of construction, as tabulated from reports in the daily bulletin of the MANUFACTURERS RECORD, showed stronger totals than their last year's counterparts.

The \$2,190,046,000 for industrial projects this year so far is about four per cent ahead of the value placed on such work in the first nine months of 1951. Totals for both periods contain substantial contracts for federal atomic and hydrogen bomb plants.

Public building, the second largest figure in the current total, is up fourteen per cent. The current nine-month total is \$765,917,000. Last year at this time, it stood at \$671,203,000.

Value of highway and bridge projects, as reported in the daily bulletin for the

nine elapsed months is \$519,873,000, this a ten per cent gain when compared with the total in the first three-quarters of 1951.

The other two elements in the current grand total are \$592,324,000 for private building and \$578,135,000 for heavy engineering construction. Decreases registered in these were twenty-five per cent and fifteen per cent, respectively.

Currently, public building includes \$532,274,000 for government buildings as such and \$233,643,000 for schools. The government building figure shows an increase of forty-four per cent. School building has dropped twenty-two per cent.

Private building's \$592,324,000 ranks third in the nine-month picture. Its constituents are \$444,964,000 for residential work; \$71,044,000 for assembly buildings; \$39,997,000 for commercial building and \$36,319,000 for office projects. Assembly building gain about twenty-four per cent.

One of the elements in the engineering

construction category was stronger in the current nine months. This is government electric work. Its total is \$97,577,000, as compared with \$40,339,000 in the similar period last year.

Total for dams, drainage, earthwork and airports this year is \$369,087,000. In the first nine months of 1951 it was recorded at \$514,675,000. Sewer and water works totaled \$111,471,000; last year at this time, it was \$119,156,000.

September's \$226,709,000 is the low point in a three-month cycle which started at a \$1,518,141,000 peak in July with an intermediate \$438,180,000 for August. The July figure, incidentally, was the high point for the year so far.

Included in the September figure, listed according to dollar value, were the \$57,517,000 for industrial projects; \$49,895,000 for public building; \$44,054,000 for highways and bridges; \$39,184,000 for private building and the \$36,059,000 for heavy engineering construction.

In the preceding month the values reported for the several categories were: Industrial, \$149,745,000; public building, \$66,595,000; highways and bridges, \$68,862,000; private building, \$63,595,000; heavy construction, \$89,383,000.

Totals for September of 1951 were: Industrial, \$28,873,000; public building, \$60,220,000; highways and bridges, \$79,840,000; private building, \$46,831,000, and heavy construction, \$36,788,000.

The current \$49,895,000 public building total is made up of \$32,983,000 for city, county, state and federal projects, including hospitals, and \$16,912,000 for schools. Both categories represent declines.

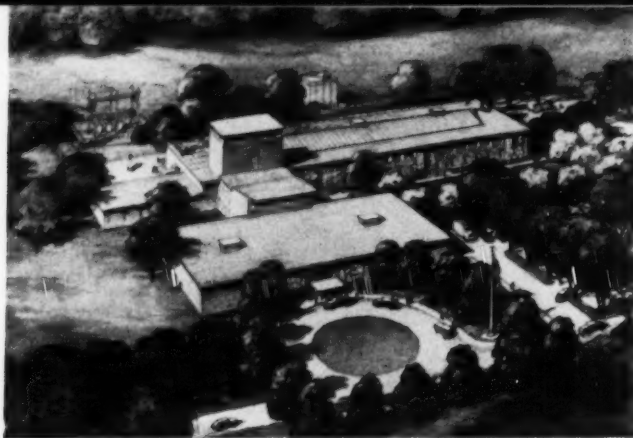
Included in the private building figure for September are \$19,762,000 for residential projects; \$7,343,000 for assembly buildings; \$6,804,000 for office buildings and \$5,275,000 for commercial buildings. The office building aggregate is up about nine per cent. Drops were registered in the other three divisions.

Heavy engineering construction embraces \$19,489,000 for dams, drainage, earthwork and airports; \$10,483,000 for

### SOUTH'S CONSTRUCTION BY TYPES

	September, 1952 Contracts Awarded	September, 1952 Contracts to be Awarded	Contracts Awarded First Nine Months 1952	Contracts Awarded First Nine Months 1951
<b>PRIVATE BUILDING</b>				
Assembly (Churches, Theatres, Auditoriums, Fraternal)	\$ 7,343,000	\$13,451,000	\$ 71,044,000	\$ 57,151,000
Commercial (Stores, Restaurants, Filling Stations, Garages)	5,275,000	23,595,000	39,997,000	45,269,000
Residential (Apartments, Hotels, Dwellings)	19,762,000	32,912,000	444,964,000	643,806,000
Office	6,804,000	12,068,000	36,319,000	46,328,000
	\$39,184,000	\$82,026,000	\$592,324,000	\$792,554,000
<b>INDUSTRIAL</b>	\$57,517,000	\$21,664,000	\$2,190,046,000	\$2,111,201,000
<b>PUBLIC BUILDING</b>				
City, County, State, Federal, and Hospitals	\$32,983,000	\$166,697,000	\$532,274,000	\$367,800,000
Schools	16,912,000	41,936,000	233,643,000	303,403,000
	\$49,895,000	\$208,633,000	\$765,917,000	\$671,203,000
<b>ENGINEERING</b>				
Dams, Drainage, Earthwork, Air- ports	\$19,489,000	\$ 53,480,000	\$369,087,000	\$514,675,000
Federal, County, Municipal Elec- tric	6,087,000	23,479,000	97,577,000	40,339,000
Sewers and Waterworks	10,483,000	58,392,000	111,471,000	119,156,000
	\$36,059,000	\$135,351,000	\$578,135,000	\$674,172,000
<b>ROADS, STREETS, BRIDGES</b>	\$44,054,000	\$181,428,000	\$519,873,000	\$471,335,000
<b>TOTAL</b>	\$226,709,000	\$629,102,000	\$4,646,295,000	\$4,720,465,000

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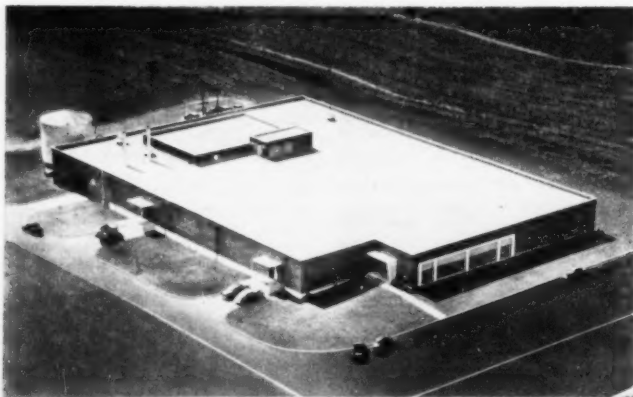


Above—Perspective of \$1,800,000 applied physics laboratory to be erected in Howard County, Maryland by Johns Hopkins University. Plans being prepared by Voorhees, Walker, Foley & Smith, New York architects, anticipate a structure partly of reinforced concrete and part skeleton steel frame, with brick facing and limestone trim. Windows will be double-hung, of aluminum. The roof will be built-up and flat, with concrete and metal fascia cornices. The layout, in addition to the laboratory, shop and office, will contain an auditorium to seat 150 people, and a cafeteria and library. Parking space will accommodate 128 cars. Bids will probably be received next January.

## SOUTH'S CONSTRUCTION BY STATES

	September, 1952 Contracts Awarded	September, 1952 Contracts to be Awarded	Contracts Awarded First Nine Months 1952	Contracts Awarded First Nine Months 1951
Alabama	\$ 5,394,000	\$ 23,063,000	\$231,168,000	\$233,746,000
Arkansas	8,918,000	6,577,000	63,787,000	145,679,000
Dist. of Col.	290,000	54,201,000	39,348,000	31,140,000
Florida	27,197,000	76,384,000	376,288,000	416,836,000
Georgia	33,822,000	51,367,000	253,037,000	163,456,000
Kentucky	8,035,000	21,675,000	339,119,000	437,977,000
Louisiana	11,244,000	21,135,000	352,333,000	346,699,000
Maryland	17,329,000	70,924,000	276,668,000	340,177,000
Mississippi	3,158,000	15,645,000	95,518,000	130,408,000
Missouri	4,861,000	11,245,000	71,650,000	140,456,000
N. Carolina	11,617,000	18,747,000	198,360,000	298,899,000
Oklahoma	11,733,000	14,079,000	121,947,000	66,892,000
S. Carolina	10,098,000	7,473,000	147,176,000	478,806,000
Tennessee	15,714,000	7,634,000	734,651,000	186,835,000
Texas	44,764,000	181,796,000	838,333,000	945,749,000
Virginia	10,783,000	42,293,000	220,961,000	269,471,000
W. Virginia	1,852,000	4,924,000	66,751,000	47,239,000
<b>TOTALS</b>	<b>\$226,709,000</b>	<b>\$679,102,000</b>	<b>\$4,646,285,000</b>	<b>\$4,720,465,000</b>

Below—New finishing plant built at Liberty, S. C., by Daniel Construction Co. for Julius Kayser Co. The plant contains approximately 100,000 square feet and cost nearly \$2,000,000. It is totally enclosed and air conditioned and has a complete Infilco water system for treatment of dyehouse wastes before discharge. All operations are located on one floor to facilitate materials handling. The plant is part of the Kayser program to integrate manufacture of full-fashioned hosiery, tricort fabrics and other of its products in the South.



## \$4,646,295,000 Awards In Nine Months

(continued from preceding page)

sewer and water works projects, and \$6,087,000 for government electric work. In August, the totals were \$23,647,000, \$25,352,000 and \$40,384,000, respectively.

The last month of the summer saw southern highway departments still active in placing projects under contract. Texas, as usual, held the largest opening. Low bids totaled \$7,966,000. Two openings were in the four million dollar category. These were Oklahoma, \$4,291,000; Florida, \$4,231,000. Other openings above the million dollar mark were: Georgia, \$3,028,000; North Carolina, \$1,976,000, and West Virginia, \$1,351,000.

Government controls were partly discontinued last month in the residential finance field, when the Federal Reserve Board suspended Regulation X following the declaration of the Labor Department that non-farm housing starts had fallen below an annual rate of 1,200,000 units in the previous three months.

While the declaration ended the emergency limitations on the amount of credit purchasers of new houses and commercial properties could obtain, it does not lower the level of down payments required by banks and other loan institutions, who are expected to continue the demand for substantial deposits in accord with sound banking practice.

The Reserve Board announcement followed a federal control relaxation in the preceding month that permitted builders to obtain increased quantities of copper and aluminum under the so-called "self authorization" procedure. Thus, most types of buildings, within certain limitations, could be erected without formal written application to federal agencies.

One authority in the finance field expects accelerated activity in the office and commercial structures field. George W. Warnecke, head of a national mortgage investment firm, said that "an unusually high amount of loan requests" indicates there will be more such projects in the near future. He mentioned Atlanta, Kansas City, New Orleans and St. Louis, among other cities, where the buildings might rise.

An authority speaking for the construction industry sees not only a tremendous backlog in office and commercial construction, but in residential, industrial, institutional and residential. This authority, the Associated General Contractors of America, observes, however, that money is harder to secure and difficulties are encountered in determining when materials will be available to complete projects undertaken.

Expenditures throughout the country in September were estimated at \$3,112,000,000 by the federal departments of Commerce and Labor. Those agencies said activity continued at high levels as "usual for this time of the year."

Nine-month private expenditures estimated at \$16,100,000,000, were reported "slightly under last year's total." Public construction, with a total of \$8,100,000,000, was estimated up by a fifth.

# Southern Construction Projects

(Typical and Important Reports Excerpted from Daily Construction Bulletin)

## ALABAMA

Department of the Army announced following Army military construction program to be undertaken for fiscal year 1953 by the Corps of Engineers in Alabama. Anniston Ordnance Depot, Anniston, \$1,817,000, hardstand, heating plant, shop and test cells; Fort McClellan, \$661,000, post engineer facilities, office, warehouse, shops, etc.; Redstone Arsenal, Huntsville, \$6,447,000, shop, laboratory, research and miscellaneous buildings; Camp Rucker, \$96,000, ammunition magazine.

**ALICEVILLE**—Picksens County Board of Education has plans in progress for elementary school, cost \$125,000.

**ANNISTON**—Anniston Memorial Hospital let contract at \$203,350 to G. C. Colyer, for remodeling hospital.

**AUBURN**—Alabama Polytechnic Institute let contract at \$229,269 to Batson-Cook Co., West Point, Ga., for addition to dining hall.

**BESSEMER**—First Presbyterian Church Congregation received low bid of \$110,894 from Robins Engineering, Birmingham, for building.

**BIRMINGHAM**—Southern Natural Gas Co. has approval of power commission for additional pipeline capacity of 40 million cubic feet of natural gas daily, \$5,268,600.

**COLUMBIANA**—City received low bid of \$190,432 from Patterson and Holmes, Birmingham, for natural gas distribution system.

**ENSLEY**—Holy Family Hospital received low bid of \$728,300 from J. F. Holley, Birmingham, for hospital.

**FLORENCE**—City received low bid from G. C. Tarlton Contracting Co., St. Louis, Mo., at \$494,912 and alt. of \$485,117 for No. 178-A, river intercepting sewer and Sweetwater Creek intercepting sewer, and \$427,771 and alt. of \$437,382 on 178-B, Cypress Creek intercepting sewer and Cox Creek intercepting sewer.

**FLORENCE**—City let contract at \$200,000 to Tri-Cities Construction Co. for water treatment plant and Chicago Bridge Co., Birmingham, at \$153,000 for water tank.

**FORT MCLELLAN**—Corps of Engineers, Mobile, let contract at \$3,925,874 to Bruce Construction Corp. for WAC Training Center.

**GADSDEN**—City Board of Education let contract at \$126,450 to Roberts Construction Engineering Co., East Gadsden, for elementary school.

**GORDO**—City let contract to McDonough Construction Co., Atlanta, Ga., at \$124,396 for natural gas system.

**JACKSONVILLE**—City Board of Education has preliminary plans in progress for school program, \$115,000.

**MOBILE**—Mobile County Board of Education received low bid of \$198,485 from Stanley W. Newman Co., for Fulton Road School.

**OPELIKA**—First Baptist Church Congregation received low bid of \$317,000 from Buck Construction Co., Columbus, Ga., for new sanctuary.

**OSARK**—Pea River Electric Cooperative let contract to Griffin Key Construction Co., Montgomery, Ala., at \$110,775 for substation and transmission line.

**RED BAY**—City received low bid of \$111,348 from Adams & Powell Construction Co., Gardendale, for natural gas distribution system.

**SHEFFIELD**—City received low bid for storm drainage system from Holt Rast Co., Birmingham, at \$242,424 for metal pipe and \$261,706 concrete pipe.

**SHEFFIELD**—Muscle Shoals Community Hotel Co. plans addition, \$160,000.

**TUSCALOOSA**—Board of Trustees for District No. 11 Tuberculosis Sanatorium has preliminary plans in progress for 150-bed tuberculosis hospital, \$1,500,000.

**TUSKEGEE**—Macon County Board of Education plans high school, \$350,000.

## ARKANSAS

Department of the Army announced the Army military construction program to be undertaken for fiscal year 1953 by the Corps of Engineers in Arkansas includes heavy equipment repair shop, Camp Chaffee, \$132,000.

**CLAY-GREENE COUNTIES**—Corps of Engineers, Memphis, Tenn., let contract to Forum-James Co., Dyersburg, Tenn., at \$33,000 for bank protection work.

**FAVETTEVILLE**—Ozarks Rural Electric Cooperative Corp. has REA loan of \$1,250,000 for 285 miles of distribution line.

**OSARK**—Arkansas Valley Electric Cooperative Corp. let contract to Killore Co., Appleton, Wis., at \$743,004 for 428 miles of line.

**SHUMAKER**—Navy Dept., New Orleans, La., let contract to Peterson, Garbi & Joseph, Inc., North Little Rock, at \$411,000 for ballastite buildings and conveyor passageway, Naval Ammunition Depot, Spec. 33426, NOV 73655.

**SHUMAKER**—Navy Dept., New Orleans, La., received apparent low bid from Utah Construction Co. & C. H. Leavell & Co., El Paso, Tex., at \$4,121,944, Item 1, and at \$3,551,644 on Item 2, for smokeless powder magazines, U. S. Naval Ammunition Depot.

## DISTRICT OF COLUMBIA

**WASHINGTON**—Acacia Mutual Life Insurance Co. let contract to Turner Construction Co. for office building addition; \$3,000,000.

**WASHINGTON**—General Services Administration let contract at \$78,288 to Edward B. Friel for miscellaneous changes, General Accounting Office Building.

**WASHINGTON**—District Commissioners received apparent low bid from A. J. Ellis Construction Co., Washington, at \$221,440, steel pipe, for trunk watermain.

**WASHINGTON**—Following schools are planned for second-year construction in six-year \$52,771,000 school program outlined by District Commissioners, second year estimated cost \$13,290,000; new junior high school, 4th Street and Mississippi Ave., S.E., \$2,500,000; new elementary school, Stanton and Evans Road, S.E., \$890,000; health school, 13th & Allison Sts., N.W., \$410,000; new elementary school, 1300 block of S St., N.W., \$750,000; new junior high school, north central area, \$3,000,000; Phelps Vocational High School replacement, \$3,200,000; new elementary school, South Capitol & Danbury Sts., S.E., \$1,080,000; new elementary school, in Payne School area, \$1,060,000; Shepherd Elementary School addition, 14th St., 1 and Kalmia Road, N.W., \$400,000.

## FLORIDA

**BAL HARBOUR VILLAGE**—Walter E. Schott Co. let contract to Harry Tolton at \$200,000 for 16-unit apartment building.

**BAY HARBOR ISLAND**—Nolan Brown Motors, Inc., Miami, let contract at \$175,189 to

## "Shackles for the Giant"

"Shackles for the Giant," a flood control movie produced by the Mississippi River Commission, has been seen by almost eight million persons representing all types of audiences.

Running 25 minutes, the color and sound film has been viewed by civic clubs, school groups, technical groups, and many industrial training organizations. It has also received wide use by television studios.

Many organizations, particularly school and other technical groups, have requested the movie for a repeat showing. A number of universities include it as a part of their course in flood control practices.

The film dramatically portrays the destructiveness of floods in the lower Mississippi River valley before 1928, when the now-famous flood control plan was inaugurated. Development of the present plan is then shown by live photography and animated drawings, and details of the plan are shown.

Copies of the film may be obtained from the president of the Mississippi River Commission, P. O. Box 80, Vicksburg, Miss.

Shinn Construction Co., North Miami, for Cadillac salon.

**CECIL FIELD**—Navy Dept., Jacksonville, let contract at \$169,640 to George D. Auchter Co., Jacksonville, for ordinance facilities, U. S. Naval Air Station, Spec. 32280, NOV 71530.

**CECIL FIELD**—Navy Dept., Jacksonville, let contract at \$442,973 to J. Hibbert Sapp, Inc., Orlando, for general storehouse, Building 52, Naval Air Station, Spec. 32281.

**CHATTANOOGUE**—Corps of Engineers, Mobile, Ala., received low bid of \$1,066,000 from Nello T. Teer, Durham, N. C., for clearing of reservoir parcels 1 and 9, Jim Woodruff Dam.

**CHATTANOOGUE**—Cabinet Committee headed by Secretary of State R. A. Gray, Tallahassee, recommended \$4,500,000 in improvements at Florida State Mental Hospital.

**COCOA**—Corps of Engineers, Jacksonville, let contract at \$277,777 to Bradford Builders, Inc., Miami Beach, for technical and humidity control warehouse at Air Force Missile Test Center.

**GREEN COVE SPRINGS**—Housing Authority plans 392-unit housing development, \$2,600,000.

**JACKSONVILLE**—City Council approved issuance of \$18,000,000 in revenue bonds for expansion of Jacksonville's electric plant.

**MIAMI**—City Commission let contract to M. S. Construction Co., at \$163,798, Item 1, and at \$161,498, Item 1A, for swimming pool including equipment, dressing rooms and cabanas, Morningside Park.

**MIAMI**—City Commission received low bid of \$163,051 from L. E. W. Corp. for storm sewer improvements.

**MIAMI**—St. Sophia Greek Orthodox Church, Miami, received low bid of \$150,775 from Dobbs Construction Co., Miami, for community center.

**MIAMI**—Kaion Investment Corp. received low bid of \$174,922 from Edward M. Fleming Construction Co. for store and office building.

**MIAMI**—Water & Sewer Board of City will release plans for bids on or about October 15, and bids will be returnable on or about January 15, 1953, for sanitary sewer improvements, \$27,000,000.

**MIAMI BEACH**—Harry Myman let contract to Robert L. Turchin, Inc., for apartment building, \$175,000.

**MIAMI BEACH**—City received low bid from Joseph Mann, Miami Beach, at \$388,772 for enlarging and improving Police Station and Traffic Department buildings.

**MIAMI BEACH**—Shelborne Hotel let contract to Plaks Construction Co., Miami, at \$640,000, for addition.

**SCHOOL**—Virginia-Carolina Chemical Corp. granted certificate of necessity by Defense Production Administration, \$4,500,000.

**SEORTH BEDINGTON BEACH**—Nathan Halpern received low bid of \$184,200 from Edward L. Bolding, Tampa, for 54-unit motel, apartment, shop and lounge.

**ORLANDO**—Corps of Engineers, Jacksonville, let contract to Buster Nobles Construction Co., Tampa, at \$169,570, for officers' mess and training headquarters building, Pinecastle Air Base.

**PENSACOLA**—Navy Dept. let contract to Dyson & Co. at \$1,583,000 for supply warehouse, Air Station.

**PENSACOLA**—Escambia County Board of Commissioners plans county jail, \$500,000.

**PENSACOLA**—Navy Dept. received low bid from Kenneth Fulghum, Pensacola, at \$514,329, for refrigerated storage building 660 addition, Air Station.

**PENSACOLA**—Santa Rosa Island Authority received low bid from Harbert Construction Corp., Birmingham, Ala., at \$288,946, for sewage treatment plant and sanitary sewers.

**PENSACOLA**—Santa Rosa Island Authority received low bid of \$352,181 from Hall Construction Co., for Div. 1, buildings, residential subdivision.

**PENSACOLA**—Navy Dept. received low bid on bid No. 1 at \$1,633,250, and bid No. 2 at \$1,583,550 from Dyson & Co. for supply warehouse, utilities and services, U. S. Naval Air Station.

**POLK COUNTY**—International Minerals and Chemical Corp. received certificate of necessity for producing uranium, \$800,000.

**ST. PETERSBURG**—City received low bid from A. P. Hennessy & Sons, Inc., at \$675,900, base bid, for addition and alterations to Mound Park Hospital.

(Continued on page 24)



# *It's the* Operators'



**BEST BY A DAM SITE.** Troy Hood and Jack Rank (shown here with Dirt Foreman Sam Crawford) operate TD-24s for Guy H. James, building the great Oahe Dam in South Dakota. Hood says: "I can keep right behind the scrapers—catch 'em sooner and push 'em out faster because TD-24 controls are easier." And Rank chimes in: "Much easier to handle than any other tractor."



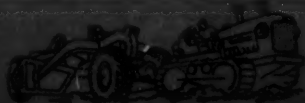
**"ALMOST THINKS FOR ITSELF!"**  
That's what Jess Leatherwood says about the Big Red TD-24 he operates for Macon Construction Co., Franklin, N. C. "It pushes more, moves it faster and handles easier than any other crawler I've ever been on."



**"WE RIP PLACES YOU'D USUALLY HAVE TO BLAST,"** says another Macon operator, Roy Cantrell. "We've been working in the Blue Ridge Mountains on rock you couldn't touch with a dozer till the TD-24 came along. Now we blade where we couldn't scratch before, and rip where we used to dynamite!"



**"OUR TD-24s REQUIRE LESS SERVICE,"** says John Tickler, Service Superintendent for John E. Bloomer Construction Co. "These big red machines are very accessible, very easy to maintain. And when we do need help, the International Distributor is always on the job!"





# Crawler!



**Read what the operators and servicemen say about "Big Red", the International TD-24...**



"HOW DO I LIKE 'BIG RED'?" asks George Miller. "Listen: This TD-24 is just the fastest and surest handling tractor there is, that's all! Nothing I've seen can touch it for moving dirt." George and his TD-24 move dirt in North Carolina for Kiker & Yount Construction Co.



"GREATEST THING I'VE SEEN," says Bruce Olson (right), TD-24 operator and Sec.-treas. of G. A. Olson Construction Co., Marshall, Minn. "The TD-24 is the easiest crawler of all to operate. The high-low shift is great for whipping around to the cut after dumping the load. It's the fastest equipment going for anything up to a 3,000-foot cycle!" Man in center is Glen Olson, Bruce's brother and company president. At left is Superintendent Donald Young.

Ask the men who know. Ask the operators. They know that *this* makes "Big Red" the Champ:

#### **TD-24 POWER**

148 maximum drawbar horsepower, more than any other crawler on the market.

#### **TD-24 SPEED**

Up to 7.8 m.p.h. with 8 forward speeds, 8 reverse. Moves loads faster, gets back quicker for more work-cycles per hour.

#### **TD-24 STEERING**

Fingertip control for pivot-turns, feathered-turns and turns with power on both tracks.

#### **TD-24 STARTING**

Exclusive International push-button starting for quick starts any time in any weather.

Want to know more reasons why the Big Red TD-24 is the work-champ of the world?

Ask your International Industrial Distributor. Ask TD-24 operators. Ask the men who know—and you'll be a TD-24 man yourself from then on in!

INTERNATIONAL HARVESTER COMPANY, CHICAGO 1, ILLINOIS

**SEE YOU AT THE POLLS!**



**INTERNATIONAL**

**POWER THAT PAYS**



# Southern Construction Projects

(Typical and important Projects Excerpted from Daily Construction Bulletin)

## FLORIDA

(Continued from page 24)

**ST. PETERSBURG**—8900 Collins Ave. Corp. let contract to Robert L. Turchin, Miami Beach, at \$725,000, for apartment building.

**ST. PETERSBURG**—Malakula, Inc. let contract to James V. Warnock, Miami Beach, at \$320,000, for 12-unit apartment building.

**TALLAHASSEE**—Florida State Improvement Commission received low bid from J. O. Carlisle at \$159,269 for remodeling and renovating old house and Senate chambers, Florida State Capitol.

**TALLAHASSEE**—Governor Warren announced the possible start of work on new \$1,500,000 state office building before end of year.

## GEORGIA

Department of the Army announced following Army military construction program to be undertaken for fiscal year 1953 by the Army Corps of Engineers in Georgia: Atlanta General Depot, \$2,154,000, warehouse, shop and office building; Fort Benning, \$3,363,000, water treatment plant, shops, offices, warehouses, magazines and utilities; Camp Stewart, \$542,000, sewer extension and rehabilitation.

**ALBANY**—Corps of Engineers, Savannah, let contract to Hall Construction Co., Atlanta, at \$214,680, for administration building, Turner Air Base.

**ALBANY**—Navy Dept., Charleston S. C., received low bid of \$1,132,557 from Bailey-Brazel Construction Co., Greenville, S. C., for fire house, motor transport shop and maintenance shop, Marine Corps Depot.

**ALBANY**—Corps of Engineers, Savannah, let contract to Bailey-Brazel Construction Co., Greenville, S. C., at \$349,220, for general purpose warehouse, Turner Base.

**ATLANTA**—Emory University received loan of \$600,000 for renovation and addition of new wing to dormitory.

**ATLANTA**—State School Building Authority sold certificates valued at \$32,097,000 for constructing school buildings.

**ATLANTA**—L. G. Saporita, professor of architecture at Georgia Institute of Technology, urges industrial mart for Southeastern states, \$15,000,000.

**ATLANTA**—City approves street lighting program for 1953, estimated cost \$125,000.

**ATLANTA**—Massell Enterprises plans 100,000 square foot building to be leased to National Linen Service Corp., between \$750,000 and \$1,000,000.

**ATLANTA**—Massell Enterprises plans 10-story downtown office building, \$2,500,000.

**ATLANTA**—Delta Air Lines received \$20,000,000 loan for expansion.

**AUGUSTA**—Richmond County Board of Education received low bid of \$536,538 from Daniel Construction Co., Greenville, S. C., for junior high school.

**CAMP STEWART**—Corps of Engineers, Savannah, let contract to Shaffer Construction Co., Brunswick, at \$457,267, for additional site facilities, emergency type construction.

**FORT BENNING**—Corps of Engineers, Savannah, let contract to Centirline Corp., New York, N. Y., at \$460,926, Sch. 11, for cleaning and lining watermain.

**GULFPORT**—City received low bid of \$595,833 from J. W. Meadows & Co., Jacksonville, Fla., for sewerage system improvements.

**SAVANNAH**—Corps of Engineers let contract to Expy Paving and Construction Co. at \$112,986 for sewerage lift station and related items, Hunter Air Base.

**ROME**—General Electric Co. received certificate of necessity by Defense Production Administration, \$24,337,875.

**SAVANNAH**—Corps of Engineers, Savannah, received low bid of \$654,528 from Arundel Corp., Baltimore, Md., for harbor maintenance dredging, CIVENG 09-133-53-7.

**TIFTON**—Culpepper & Edwards, Pelham, have general contract at \$238,000 for dormitory for girls at Abraham Baldwin College.

## KENTUCKY

Department of the Army announced following Army military construction program to be undertaken for fiscal year 1953 by the Army Corps of Engineers in Kentucky: Blue Grass Ordnance Depot, Richmond, \$64,000, shop addition; Fort Campbell, \$622,000, water treatment plant, target range; Fort Knox, \$11,404,000, school and research buildings, shops and miscellaneous facilities; Lexington Signal Depot, \$30,000, addition to substation; Louisville Medical Depot, \$5,155,000,

warehouses, shops and utilities.

**BOWLING GREEN**—Warren Rural Electric Cooperative Corp. let contract to A. A. Electric Co., Cicero, Ill., at \$369,370, for Proj. Ky. 370.

**CAMP BRECKINRIDGE**—Corps of Engineers, Louisville, let contract to Thorp Construction Co., Evansville, Ind., at \$117,723, for five buildings.

**COSINGTON**—Kenton County Fiscal Court plan election on \$125,000 bond issue for county garage and police headquarters.

**FORD**—East Kentucky Rural Electric Cooperative Corp. received low bid of \$1,841,000 from Traylor Brothers, Inc., Evansville, Ind., for Ford power plant.

**FORT KNOX**—Corps of Engineers, Louisville, let contract to Jack A. Roberts, Birmingham, Ala., at \$275,703, for classrooms.

**MAYFIELD**—West Kentucky Rural Telephone Cooperative Corp. has REA loan of \$1,180,000 to improve and extend existing telephone facilities.

## LOUISIANA

**ABBEVILLE**—Police Jury of Vermilion Parish received allocation of \$125,000 for health center building.

**ALEXANDRIA**—First Presbyterian Church Congregation let contract to Gravier & Harper at \$313,843 for educational building.

**BATON ROUGE**—State Building Authority, Baton Rouge, selected Curtis & Davis, New Orleans, Architects, for \$4,000,000 construction at Louisiana State Penitentiary.

**BATON ROUGE**—State Division of Administration let contract to Hall & Cox Construction Co. at \$242,445 for new office building for East Baton Rouge Parish Department of Public Welfare.

**BATON ROUGE**—Mt. Zion Baptist Church Congregation let contract to L. W. Eaton Co., Inc. at \$138,855, for building.

**SR. COLFAX**—District Engineer, New Orleans, let contract to Clark-Farrall Construction Co., Brinkley, Ark., at \$692,336, for diversion channel.

**DE RIDDER**—T. Miller & Sons, Lake Charles, received \$418,336 contract for physical education building and George Washington Carver High School.

**CONZALE**—Ascension Telephone Co., Inc., let contract at \$278,654 to R. D. Cooper Construction Co., Zachary, for outside plant and station telephones.

**GRAMBLING**—State Building Authority, Baton Rouge, selected Neild-Somdal Associates, Shreveport, as architects for girls' dormitory and elementary-high school building; Henry E. Schwarz, Shreveport, as architect for boys' dormitory; and Johns and Neel, Monroe, as architects for bachelor teachers' dormitory at Grambling College, \$1,250,000.

**HARAHAN**—St. Rita of Cascia Church received low bid of \$192,940 from Gervais F. Favrot Co., Inc., for church and school building.

**JENA**—City approved \$467,000 bond issue for improvements and extensions to natural gas system.

**LAKE CHARLES**—Simpson Methodist Church Congregation plans building, \$180,800.

**LAKE CHARLES**—Magnolia Petroleum Co. let contract to Mettallic Building Co., Houston, for warehouse at \$367,000.

**MONROE**—City Council let contract at \$150,342 to Dye & Mullings, Inc., Columbia, Miss., for central fire station.

**NEW IBERIA**—Iberia Parish Police Jury has allocation of \$100,000 for health center.

**NEW ORLEANS**—Corps of Engineers let contract to Clark-Farrall Construction Co., Brinkley, Ark., at \$692,336, for Cane River and Bayou Diversion Channel.

**NEW ORLEANS**—Corps of Engineers, Galveston, Tex., received low bid from James F. O'Neil Co., New Orleans, on Sec. 1A, at \$831,661 and on Sec. 1B, at \$816,900 (refrigeration machines), for dehumidification system, Michoud Ordnance Plant.

**NEW ORLEANS**—Corps of Engineers, Galveston, Tex., let contract to James F. O'Neil Co., New Orleans, at \$156,720 for ventilation and exhaust, Michoud Ordnance Plant.

**NEW ORLEANS**—Library Board, City Librarian, plans new branch libraries in the Broadmoor and Lakeview sections and rebuilding of hut housing the Nora Navra Library, New Orleans, \$150,000.

**NEW ORLEANS**—New Orleans Dock Board plans new wharves, \$7,000,000.

**NEW ORLEANS**—Orleans Parish School Board let contract at \$427,260 to A & O Building Co., New Orleans, for school building.

(Continued on page 26)

## Missouri Road Awards Made at \$528,727

Nineteen contracts were awarded last month by the Missouri State Highway Commission. As announced by Rex M. Whitton, Missouri's chief highway engineer, the projects were:

Sainte Genevieve — SW S-887(2)-A 2,809 miles, graded excavation; culverts; & gravel or crushed stone surface; low bidder: Penzel Construction Co., Jackson, Mo., \$12,883;

Sainte Genevieve — SW S-887(2)-B 2,273 miles, graded excavation; culverts; & gravel or crushed stone surface; Penzel Construction Co., Jackson, Mo., low bidder, \$10,406;

St. Francois — STT S-887(2)-C, 160 of a mile, graded excavation; culverts & gravel or crushed stone surface; low bidder, Penzel Construction Co., Jackson, Mo., \$776;

Ray — SO S-1205(1)-A, 3,295 miles, graded excavation; culverts & gravel or crushed stone surface; low bidder: Frank Trager, Chillicothe, Mo., \$28,538;

Ray — SO S-1205(1)-B, graded excavation; culverts, concrete bridge floor & gravel or crushed stone surface—3.204 miles, low bidder: Frank Trager, Chillicothe, Mo., \$41,372;

Saline — SF S-1018(1)-A, 1,066 miles, graded excavation; culverts & gravel or crushed stone surface; low bidder: Krehbiel-Stalker Construction Co., Columbia, Mo., \$16,248;

Saline — SF S-1018(1)-B, 4,454 miles, graded excavation; culverts, bridge & gravel or crushed stone surface; low bidder: Krehbiel-Stalker Construction Co., Columbia, Mo., \$57,676;

Stoddard — SU S-134(3)-A, 2,017 miles, graded excavation; culverts & gravel or crushed stone surface; low bidder: J. W. Githens, Poplar Bluff, Mo., \$19,805;

Stoddard — SU S-134(3)-B, 3,306 miles, graded excavation; bridge & gravel or crushed stone surface; low bidder: J. W. Githens, Poplar Bluff, Mo., \$45,090;

Schuyler — SC S-1019(1)-A, 3,036 miles, graded excavation; culverts, bridge & gravel or crushed stone surface; low bidder: Everett R. Elsen, Kirksville, Mo., \$39,890;

Clark — SD S-451(7), 3,358 miles, graded excavation; culverts, bridge & gravel or crushed stone surface; low bidder: Brooks Quarry & Construction Co., Kahoka, Mo., \$49,188;

Lewis — SK S-828(6), 3,458 miles, graded excavation; culverts & gravel or crushed stone surface; low bidder: Everett R. Elsen, Kirksville, Mo., \$34,365;

Saline — 240 ER-14(2), 222 of a mile, Portland Cement Concrete Pavement; 20 feet wide; low bidder: Davis Construction Co., Booneville, Mo., \$19,113;

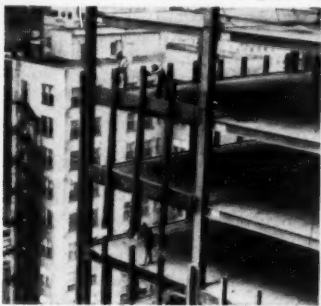
Christian — SZ S-912(1), 3,372 miles, graded excavation; culverts & gravel or crushed stone surface; low bidder: M. E. Gillioz, Monett, Mo., \$23,329;

Dallas — SD S-497(2), 125 of a mile, graded excavation; culverts, bridge and gravel or crushed stone surface; low bidder: Burk Construction Co., Springfield, Mo., \$16,358;

Dunklin — SH S-134(2), 4,548 miles,

(Continued on page 33)

THE DRAMATIC UPSWEEP of glass and steel that distinguishes Chicago's latest skyscraper apartment building was made possible by the unique steel design and construction that holds the floor-to-ceiling glass walls in place. The steel face of the building consists of horizontal fascia plates welded across the spandrel beams, with vertical I-beam mullions on 5-foot, 3-inch spacings running the height of the building.



# 3,600-Ton Steel Framework for Chicago's Unique Glass House



Owner: 860 Lake Shore Drive Trust.  
Architects and Engineers: Mies Van Der Rohe, Pace Associates, and Holsman, Holsman, Klekamp & Taylor, Chicago.

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TWO 26-story towers of steel and glass connected at basement and ground floor comprise this ultra-modern 288-apartment structure. The unique design and construction of the vertical mullions and horizontal fascia plates made possible the framing that holds the glass walls in place. There are no conventional masonry curtain walls. This imposing building occupies a block-long site along Lake Shore Drive and provides a beautiful view overlooking Lake Michigan on Chicago's swanky North Side within a short drive of the Loop. The 2,842 tons of structural steel and the 856 tons of plate steel for the face of the building were fabricated and erected by American Bridge.

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UNITED STATES STEEL

# Southern Construction Projects

(Typical and Important Projects Excerpted from Daily Construction Bulletin)

## LOUISIANA

(Continued from page 24)

ers for new Thomy Lafon Elementary School.  
**PINEVILLE**—State Building Authority, Baton Rouge, selected Barron, Heinberg & Brocato, Alexandria, as architects for 200-bed tubercular unit and Charles T. Roberts, Alexandria, as architect for dormitories and wards, Central Louisiana State Hospital, \$1,500,000.

**PLAQUEMINE**—City has construction underway with Barnett Brenner, Alexandria, on \$234,400 water treatment plant.

**RANSVILLE**—Rapides Parish Board of Commissioners let contract at \$979,000 to Swilling & Boyd, Waco, for water distribution system.

**SHREVEPORT**—City Council received low bid of \$159,840 from Baker Contracting Co. for installation of 21-inch VC sewer main and Koller Construction Co., Oklahoma City, Okla., for water main.

**SHREVEPORT**—Corps of Engineers, Little Rock, let contract to Monica Construction Co. at \$179,966 for buildings, Barksdale Air Base.

## MARYLAND

State Planning Commission submitted to Governor Theodore R. McKeldin capital improvement program to include \$786,500 for Frostburg State Teachers College; \$200,000 for Maryland State School for the Deaf; \$60,000 for Salisbury State Teachers College; \$78,500 for Towson State Teachers College; \$495,000 for Bowie State Teachers College; \$275,000 for Coppin State Training School; \$310,000 for Morgan State College; \$365,000 for University of Maryland; \$19,000 for Bartlett Training School for Girls; \$458,600 for Boys Village of Maryland; \$240,000 for Training School for Boys; \$67,000 for Montross School for Girls.

State Planning Commission submitted to Governor Theodore R. McKeldin a capital improvement program to include \$919,000 for Department of Forests and Parks; \$25,850 for Department of Research and Education; and \$142,000 for Maryland State Police; also \$2,000,000 for an institution for criminally insane.

State Planning Commission submitted to Governor Theodore R. McKeldin a capital improvement program to include \$36,000 for Penitentiary Sanatorium; \$249,763 for Crownsville State Hospital; \$89,000 for Eastern Shore State Hospital; \$843,947 for Springfield State Hospital; \$1,910,682 for Spring Grove State Hospital; and \$25,000 for Central Farm.

Department of the Army announced following Army military construction program to be undertaken for fiscal year 1953 by Corps of Engineers in Maryland: Aberdeen Proving Ground, \$5,419,000; airfield extension, rifle range, shops and magazines; Army Chemical Center, Edgewood, \$800,000; test facilities and igloos; Camp Detrick, Frederick, \$19,958,000; warehouse, laboratories and utilities; Fort George G. Meade, \$335,000; magazines and telephone exchange; Walter Reed Army Medical Center, \$731,000; laboratories and incinerator.

**ABERDEEN**—Corps of Engineers, Baltimore, plans advertising for bids about November 1, for laboratory and engineering building for development and proof service, Aberdeen Proving Ground, \$500,000 to \$1,000,000.

**ANDREWS FIELD**—Corps of Engineers, Washington, D. C., let contract at \$377,000 to Gunnell Construction Co., Washington, D. C., for maintenance hangar with shops, Andrews Air Base.

**ANNAPOLIS**—Navy Dept. let contract to Walter Truland Corp., Arlington, Va., at \$627,750 for improvements to electrical distribution system, Naval Engineering Experiment Station.

**BALTIMORE**—Associated Jewish Charities has \$11,200,000 available toward \$16,000,000 building program of new Jewish Medical Center.

**BALTIMORE**—Board of Estimates let contract at \$126,771 to Florence Pipe & Foundry Co., Philadelphia, Pa., for cast-iron pipe for water system.

**BALTIMORE**—Board of Estimates authorized new sanitary sewers in Cross Country Boulevard, Hancock Road, Ridgeview Ave., Parkmont Ave. and vicinity, \$109,500.

**BALTIMORE**—Corps of Engineers plans advertising for bids about February 1 for facilities at Air Research & Development Command Headquarters, \$3,000,000 to \$5,000,000.

**BALTIMORE**—Department of Public Im-

provements let contract at \$920,900 to John K. Ruff, Inc., for science building at Morgan State College.

**BALTIMORE**—Department of Public Improvements let contract to Howard P. Foley Co. at \$187,700 for electric distribution system, Maryland Penitentiary.

**BALTIMORE**—City will receive bids October 21 on \$1,500,000 water bond issue.

**BALTIMORE**—City will receive bids October 21 on \$7,600,000 bond issue for school construction.

**BALTIMORE**—City will receive bids October 21 on \$1,400,000 bond issue for health and welfare improvements.

**BALTIMORE COUNTY**—County Commissioners, Towson, received low bid of \$153,148 from Charles J. Spielman Co., Inc., for sewage pumping station.

**BALTIMORE COUNTY**—County Commissioners, Towson, received low bid of \$106,600 from Fidelity Construction Co., Baltimore, for sewage pumping station.

**BALTIMORE COUNTY**—County Commissioners, Towson, received low bids for force main and sewer, Section B, Buckley & Co., Philadelphia, Pa., \$121,483; and Section E, at \$115,751; Contract No. 267-S.

**BEL AIR**—Harford County Commissioners approved construction of new County Health and Welfare Center, \$170,000.

**BETHESDA**—Public Buildings Service let contract to John McShain, Philadelphia, at \$869,500, for apartment building.

**CHESTER TOWNS**—Washington College plans raising \$500,000 for improvements.

**COLLEGE PARK**—University of Maryland plans \$3,850,000 projects.

**EDGEWOOD**—Corps of Engineers, Baltimore, plans advertising for bids about December 1, for biophysics laboratory, Army Chemical Center, less than \$100,000.

**EDGEWOOD**—Corps of Engineers, Baltimore, received low base bid of \$692,775 from Baltimore Contractors, Inc., Baltimore, for addition to Building 330, Army Chemical Center.

**FORT GEORGE G. MEADE**—Corps of Engineers, Baltimore, let contract to John K. Ruff, Inc., Baltimore, at \$867,900 for Signal Corps engineering laboratories, field station No. 4, and paving; Ser. ENG-18-020-53-10.

**FREDERICK**—Corps of Engineers, Washington, D. C., received apparent low bid from Frederick & Sons, Frederick, Md., \$975,075, Item 1, for service and breeding buildings, utility building and corral area, etc., Camp Detrick.

**HARBOR COUNTY**—Consolidated Gas, Electric Light and Power Co. of Baltimore has plans completed for Bel Air-Fountain Green distribution center, \$100,000.

**MONT WILSON**—Department of Public Improvements, Baltimore, let contract to Mullin Contracting Co., Baltimore, at \$381,412 for Units A, B & C, employees' housing, Mount Wilson State Hospital.

**PATUXENT RIVER**—Navy Dept., Washington, D. C., let contract to Williams Construction Co., Middle River, at \$2,282,879, for runway extension, Patuxent Naval Air Station.

**PRINCE GEORGES COUNTY**—Prince Georges County, Hyattsville, received low bid of \$131,998 from Certified Builders, Washington, D. C., for Seabrook School.

**STEVENSVILLE**—Eastern Shore Real Estate Co. plans shopping center near east end of Chesapeake Bay Bridge, \$1,000,000.

**SYKESVILLE**—Department of Public Improvements, Baltimore, received low base bid of \$161,464 from J. H. Lawrence Co., Baltimore, for boiler auxiliaries, second building phase, Springfield Hospital.

**UPPER MARLBORO**—Prince Georges County recommended \$1,200,000 bond issue for school construction.

## MISSISSIPPI

**AMORY**—Mayor and Board of Aldermen of City let contract to M. & W. Construction Co., Tupelo, at \$125,763, for new swimming pool and wading pool, bath house, concession stand, septic tank and disposal field and apartments at park.

**ANGUILA**—Board of Trustees of Anguilla Consolidated School received low bid of \$123,000 from Dixie Builders & Supply Co., Raleigh, for new buildings at Anguilla School.

**CAMP SHELBY**—Corps of Engineers, Mobile, Ala., let contract to Layne-Central Co., West Jackson, at \$191,396, for water supply facilities.

(Continued on page 28)

## Turnpike Bridge Design Changed in Oklahoma

Blocked in its efforts to obtain structural steel, the Oklahoma Turnpike Authority is re-negotiating Turner Turnpike bridge contracts to substitute pre-stressed reinforced concrete girder beams.

The change affects 11 bridges on the 88-mile Oklahoma City-Tulsa route on which contractors have not started work. They need 826 tons.

A Tulsa contractor, P. E. Blair, and Son, has promised the authority to have all pre-stressed beams delivered by the last of December.

General Manager H. E. Bailey says the design on more bridges may be changed to pre-stressed if the steel shortage grows worse.

Designs on bridges where contractors can guarantee steel will not be changed, Mr. Bailey says.

The Blair company has agreed to execute a \$250,000 bond guaranteeing the beams against failure in workmanship for a two-year period and to guarantee delivery on schedule.

The turnpike has 52 bridges under construction, 25 of which have reached the steel laying stage; fourteen others are completed.

While sweating over the delay the steel situation is making in the completion of the highway now set for February, the turnpike board received notice from the Oklahoma City Army Board to get its consulting engineers, DeLeuw Cather & Co., out of the national guard armory within 30 days.

The authority was also told to vacate its garage space within a like period and in the same notice was informed occupancy of its offices in the armory was short lived.

## Service Engineering, Tulsa Named by Worthington

A distributorship agreement has recently been signed by Service Engineering Co., Inc., 2910 East 15th Street, Tulsa, Okla., with Worthington Corp. The Tulsa firm will handle Worthington's multi-V-drives and Allspeed selectors, according to an announcement by Wade A. Eskridge, executive vice president and general manager of the Service Company.

For the past two years the firm has been serving oil fields, lead and zinc mines, rock crushing firms, construction contractors and machine shops in eastern Oklahoma, eastern Kansas, southwest Missouri and northwest Arkansas.

## Route Three Extended

State Highway 3, already the longest road in Oklahoma, was extended nearly 100 miles by the Oklahoma State Highway Commission.

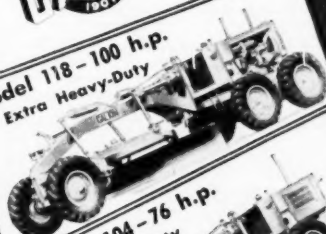
Originally the road ran from Antlers in Southeast Oklahoma, northwest to the Colorado state boundary, 234 miles all hard surfaced.

The extension sends the road from Antlers east to the Arkansas state line over 70 miles of gravel surface on State 7 and over 28 miles of paving on U.S. 70.

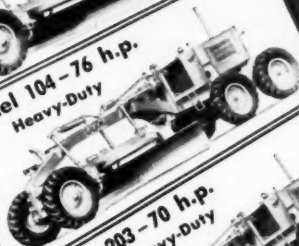




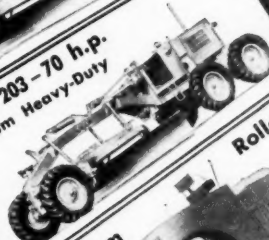
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Extra Heavy-Duty



Model 104-76 h.p.  
Heavy-Duty



Model 203-70 h.p.  
Medium Heavy-Duty



Tandem

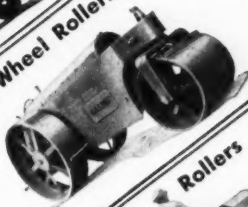


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# Southern Construction Projects

(Typical and Important Projects Excerpted from Daily Construction Bulletin)

## MISSISSIPPI

(Continued from page 26)

**COLLIERIES**—Oldbury Electro-Chemical Co., Niagara Falls, N. Y., let contract to D. S. McClanahan & Son for chemical plant, \$1,500,000.

**DREW**—Drew Baptist Church Congregation let contract to Webster Construction Co., Meridian, Miss., at \$56,100, for educational building.

**GULFPORT**—Mayor and Board of Commissioners of City let contract to Construction Engineers, Inc., Gulfport, at \$13,800, for general repairs and renovation of City Hall.

**GULFPORT**—Navy Dept., Charleston, S. C., received low bid from Anthony Hamlin, Inc., New Orleans, La., at \$29,990, for painting exterior and interior of 20 buildings and interior of nine other buildings, Gulfport Naval Construction Battalion Center; Spec. 5179.

**JACKSON**—City Council let contract at \$179,999 to C. N. Mason, Pensacola, Fla., for sanitary sewers, manholes and necessary appurtenances, and M. V. Arledge, Jackson, at \$96,717, for watermain.

**LAI REL**—Williams Funeral Home received low bid of \$69,663 from Watkins & Snowden, Meridian, for funeral home building.

**MERIDIAN**—East Mississippi Electric Power Association let contract to D-K-L Construction Co., Jackson, at \$236,729, for 204 miles.

**MERIDIAN**—Citizens National Bank received low bid of \$34,732 from L. B. Priest & Son for remodeling bank building.

**PASCAGOULA**—Gulf Improvement Co. will construct a phosphate plant, \$7,315,000, and an ammonia and nitrogen plant, cost \$7,315,000.

**PASCAGOULA**—Board of Supervisors of Jackson County let contract to Dye & Mullins, Inc., Columbia, at \$38,610, for Arts Building, County Fair Grounds.

**WEST POINT**—First Presbyterian Church Congregation let contract to M. M. Lockard, Jr., Meridian, at \$103,000, for educational building.

**YAZOO CITY**—Mrs. H. B. Lightcap received low bid of \$43,643 for apartment housing building.

**YAZOO CITY**—City approved issuance of \$250,000 bond issue for expansion of Mississippi chemical Corp.'s plant.

## MISSOURI

**BOLTON**—Crawford Electric Cooperative has REA loan of \$785,000 for 199 miles of distribution line, system improvements including headquarters facilities, and completion of previously approved construction Mo. 54 N Crawford.

**CAMP CROWDER**—Department of the Army announced Army military construction program to be undertaken for fiscal year 1953 by the Army Corps of Engineers in Missouri includes barracks and processing buildings, Camp Crowder, \$1,981,000.

**CHILICOTHE**—Farmers Electric Cooperative let contract to Berger Construction Co., Higginsville, Mo., at \$456,767, for construction of 311.7 miles of line, proj. Mo. 421 Caldwell.

**CLAYTON**—Concordia Seminary plans dormitory, \$300,000.

**GRANDVIEW**—Corps of Engineers, Kansas City, let contract to William S. Rawlings Co., Kansas City, at \$114,306, for air police headquarters and cells and navigational aids, Grandview Air Base.

**HAVIL**—Pemiscol-Dunlin Electric Cooperative has REA loan of \$195,000 for headquarters facilities, Mo. 121 Pemiscol.

**KANSAS CITY**—Corps of Engineers let contract to Seth E. Glem & Assoc., Springfield, at \$687,713, for BQ and mess, Grandview Air Base.

**NORMANDY**—Normandy Sanitary Sewer District let contract at \$229,268 to E. J. Fischer for sanitary sewer extensions and lift stations.

**ST. LOUIS**—Board of Education let contract at \$93,806 to Robert Paulus Construction Co. for additions and alterations to Dunbar School.

**ST. LOUIS**—New Hampshire Realty & Construction Co., will erect apartment, \$50,000.

**ST. LOUIS**—City let contract at \$55,920 to Skraman Construction Co., University City, for sewers.

**ST. LOUIS**—Reynolds Metal Co. let contract to Murch-Jarvis Co. for alterations to warehouse, to be leased to Kaiser Brewing Corp., \$200,000.

**ST. LOUIS**—Missouri Baptist Hospital,

Inc., let contract to A. H. Haesele Building & Contracting Co. at \$42,092 for main floor entrance addition.

## NORTH CAROLINA

**CAMP LEJEUNE**—Navy Dept., Charleston, S. C., received apparent low bid from T. A. Loving & Co., Goldsboro, at \$1,198,800, on item 1, for clearing, grading, pavements, outside facilities, railroads, Peterfield Point.

**CHARLOTTE**—Hutchinson Avenue Baptist Church Congregation plans new church building, \$100,000.

**CHARLOTTE**—Enderly Park Baptist Church Congregation received low bid of \$169,400 from Atlantic Bldg. Co. for new building.

**CHARLOTTE**—George Kostakes received low bid of \$89,252 from Bumgarner Construction Co., Conover, N. C., for shopping center.

**CHERRY POINT**—Navy Dept., Charleston, S. C., received low bid of \$8,436 from Cheney Electric Co., Charlotte, for expansion of outside telephone plant facilities, U. S. Marine Corps Air Station.

**DURHAM**—Watts Street Baptist Church Congregation received low bid of \$130,326 from C. A. Herrin, Durham, for church building.

**DURHAM**—Durham County Board of Education plans voting Nov. 4 upon \$4,000,000 bond issue for school construction.

**FORT BRAGG**—Department of the Army announced that the Army military construction program to be undertaken for fiscal year 1953 by the Army Corps of Engineers in North Carolina includes warehouses, roads, railroad, lighted repair shops and hangars, Fort Bragg, \$8,410,500.

**FORT BRAGG**—Corps of Engineers, Wilmington, let contract to Shafter Construction Co., Greensboro, at \$335,466, on Part A, and to Rogers Construction Co., at \$10,455 on Part B, for warehouse building, heating plant, railroad spur and utilities.

**FUQUA-YARINA**—City approved \$77,000 bond issue for enlarging and extending waterworks system.

**GREENSBORO**—A. & T. College let contract at \$356,976 to L. B. Gallimore for engineering building.

**GREENSBORO**—Board of Trustees received low bid from Brooks Lumber Co., Greensboro, at \$104,989, for addition to Brooks School.

**HAW RIVER**—Alamance County Sanitary District let contract for sanitary sewer and waterworks improvements to Boyd & Go-forth, Pineville Road, Charlotte, on Section A, \$152,348, and Section B, \$196,624.

**JACKSONVILLE**—Navy Dept., Charleston, S. C., let contract at \$385,450 to T. A. Loving Co., Goldsboro, for boiler plant and steam distribution system, Peterfield Point.

**JACKSONVILLE**—Onslow County Board of Education received low bid of \$596,969 to M. L. Skinner, New Bern, for new River Elementary School.

**KANNAPOLIS**—Jackson Park Methodist Church Congregation let contract to Barger Construction Co., Mooresville, at \$82,900, for addition to sanctuary and new educational building.

**MORGANTON**—North Carolina Hospitals Board of Control received low bid from G. L. Wilson Building Co., Statesville, at \$139,000, for dormitory for male patients, State Hospital.

**MORGANTON**—North Carolina School for Deaf let contract at \$244,600 to P. S. West Construction Co., Statesville, for pre-school unit.

**NEW HANOVER COUNTY**—New Hanover County Board of Education, Wilmington, received low bid of \$127,000 from Rogers-Du-Vaun, Inc., Wilmington, for addition to Wilton Elementary School.

**NEWTON**—Board of Trustees, Newton-Conover Schools Administration, let contract at \$86,875 to Herman-Sipe & Co., Conover, for additions to Newton Elementary School.

**NEWTON**—Board of Trustees, Newton-Conover Schools, received low bid from C. T. Bennett Construction Co., Kings Mountain, at \$120,276, for additions to Colored High School.

**NORTH WILKESBORO**—Board of Trustees of Wilkes General Hospital received low bid from H. H. Kiziah, Highway N-127, Hickory, at \$123,450, for nurses' home.

**PINEHURST**—City School Administrative Unit received low bid of \$88,984 from J. H. Kiziah, Hickory, for auditorium and administration building addition to Pinehurst Elementary School.

(Continued on page 30)

## Louisiana Low Road Bids Set at \$385,674

Louisiana's State Highway Department last month received low bids amounting to \$385,674 for projects in the following parishes:

**Bienville**—State Project 43-02-05, 47,000 cubic yards base course sand clay gravel (Grade B) furnished spot-dumped on the Hodge-Oak Grove Highway, State Route No. 101; Paul A. Lambert, Simmesport, La., \$107,160;

**Lincoln**—State Project No. 43-03-05, 5,600 cubic yards base course sand clay gravel (Grade B), furnished spot-dumped on the Oak Grove-Union Church Highway, State Route No. 101, Paul A. Lambert, Simmesport, La., \$12,768;

**Sabine**—State Project No. 113-01-07, 8,660 cubic yards surface course sand clay gravel (Grade B Modified) furnished spot-dumped on the Many Marthaville Highway, State Route 404; McCormick & Spaulding, 2526 Avenue B Hillcrest, Alexandria, La., \$20,004;

**Natchitoches**—State Project No. 113-02-04, Purchase Requisition No. 37873A, 2,740 cubic yards surface course sand clay gravel (Grade B Modified), furnished spot-dumped on the Many Marthaville Highway, State Route No. 404; McCormick & Spaulding, 2526 Ave. B, Hillcrest, Alexandria, La., \$6,110;

**Natchitoches**—State Project No. 835-01-03, Purchase Requisition No. 37872A, 4,800 cubic yards surface course sand clay gravel (Grade B Modified) furnished spot-dumped on the Black Lake Loop Road, State Route No. 1263; item 1, Normand Brothers, Marksville, La., \$6,000;

**Evangeline**—State Project No. 703-09-84, 4,996 cubic yards washed gravel furnished spot-dumped on certain public roads; items 1 & 3, L. O. Campbell, Ville Platte, La., \$10,971; items 2 & 4, Wesley King, Turkey Creek, La., \$4,230;

**Natchitoches**—State Project No. 703-09-85, Part 1, 600 cubic yards washed gravel furnished spot-dumped on certain public roads; item 1, Paul A. Lambert, Simmesport, La., \$948; item 1, Alexandria Gravel Co., Inc., Box 2030, Alexandria, La., \$948; item 2, Paul A. Lambert, Simmesport, La., \$1,832;

**Natchitoches**—State Project No. 703-09-85, Part 2, 1,500 cubic yards washed gravel furnished and delivered f.o.b. railroad cars at various destinations for use on certain public roads; items 1 & 2, Alexandria Gravel Co., Inc., Alexandria, La., \$3,500; item 3, Rapides Gravel Co., Inc., Alexandria, La., \$1,695;

**Concordia**—State Project No. 703-09-86, 4,125 cubic yards washed gravel and 1,500 cubic yards sand clay gravel (Grade B) furnished spot-dumped on certain public roads; items 1, 2 & 3, St. Catherine Gravel Co., Natchez, Miss., \$6,540; items 4, 5 & 6, Quality Gravel Co., Alexandria 5, La., \$3,726; items 7, 8 & 9, R. G. Cruse & W. R. Gray, Sicily Island, La., \$9,637;

**St. James**—State Project No. 703-09-87, 6,805 cubic yards washed gravel furnished f.o.b. railroad cars at various sidings for use on certain public roads; Jahncke Service, Inc., 814 Howard Avenue, New Orleans, La., \$21,886;

(Continued on page 32)

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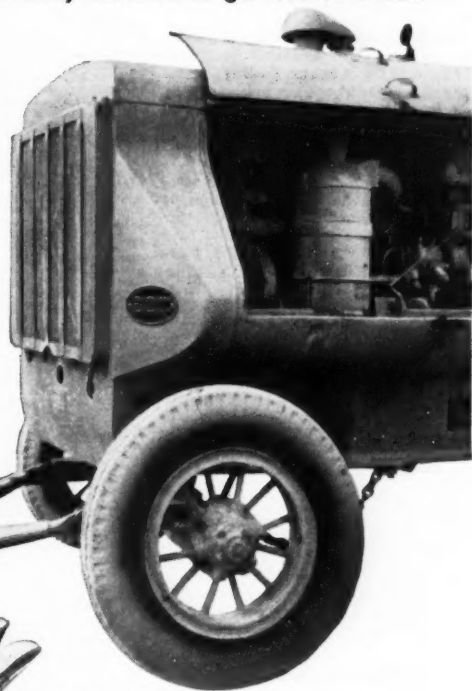
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Houston  
El Paso

## Six West State Projects to Cost \$1,351,635

Six West Virginia highway projects will cost \$1,351,635 under bids opened last month by the State Road Commission at Charleston. The projects located in Gilmer, Marion, Mercer, Monongalia, Raleigh and Roane counties are the following:

**Gilmer County**—Federal aid secondary project S-629 (1), 2.97 miles of the Alice-Cox's Mill Road (Sec. 1) for grading, draining, traffic bound base course type "B"; low bidders: Stickley Brothers, Inc., Keyser, W. Va., \$121,799; F. F. Earp, \$135,393; Beaver Construction Co., \$135,877; A. A. & D. M. Bostic, \$155,528; Forbes Construction Co., \$178,468.

**Marion County**—Federal aid secondary project S-15 (2); 4.089 miles of the Jamison No. 9-Basnetville Road (Sec. 15) for grading; draining and traffic bound base type "B"; low bidders: J. F. Allen Co., Clarksburg, W. Va., \$314,675; Keeley Construction Co., \$318,907; Harman Brothers, \$333,995; W. A. Wilson & Sons Construction Co., \$346,754; Stickley Brothers, Inc., \$374,634; F. F. Earp, \$408,458.

**Mercer County**—State project 3636; 35 of a mile of the Memorial Boulevard at Bluefield (U. S. 21) for grading; draining and asphaltic concrete base widening and surface; low bidders: Roads Materials, Inc., Bluefield, W. Va., \$134,512; J. M. Francesca & Company, \$137,740; Brown & Wright, \$139,740.

**Monongalia County**—Federal aid secondary project S-628(1); 2.853 miles of the Bula-Daybrook Road (Sec. 21) for grading, draining and traffic bound base Type "B"; low bidders: F. F. Earp, Fairmont, W. Va., \$105,454; Beaver Construction Co., \$107,265; Stickley Brothers, Inc., \$107,624; Harman Brothers, \$110,651; Kanawha Construction Co., \$131,446.

**Raleigh County**—Federal Aid Project S-173 (23), 6.061 miles of the Raleigh-Shady Springs Road (U. S. 19 & U. S. 21) for grading; draining, and asphalt concrete base; bottom and wearing courses; low bidders: Oscar Vecellio, Beckley, W. V., \$564,661; Acme Construction Co., \$569,680; Vecellio & Grogan, Inc., \$640,800.

**Roane County**—Federal Aid Project P-139 (7), section 2; 6.584 miles of the Jackson County Line-Spencer Road (U. S. 33) for grading; draining, road mix surface and asphaltic concrete wearing course; Anderson's Inc., & W. Va. Black Rock Co., Charleston, W. Va., \$110,532; Standard Asphalt & Tar Co., \$120,407.

## Road Group Formed

The Oklahoma Road Improvement Association has been chartered to promote a vote on highway and bridge bonds.

Directors are Carl Tier, of Woodward, former S.H. 34 association president; Wayman Cornelison, Fairview, U.S. Highway 60 state association president; Dr. Marshall T. Finley, Ketchum, of the Eastern Oklahoma Playground association; Bryan Goldsby, Purcell chamber of commerce secretary; W. J. Masters, and Ralph Cissna and Houston Hendrix.

## Southern Construction Projects

(Typical and Important Projects Excerpted from Daily Construction Bulletin)

### NORTH CAROLINA

(Continued from page 28)

**mentary School.**  
**RALEIGH**—Wake County Board of Commissioners plans \$3,000,000 hospital program, includes new county hospital, additions to Rev. Hospital and St. Agnes Hospital.  
**RALEIGH**—Superintendent of Buildings and Grounds, State Agriculture Bldg., let contract to Rogers Construction Co., Smithfield, at \$395,860 for State Health Building.  
**WILMINGTON**—Navy Dept. to start work within 60 days on \$1,000,000 expansion program at Blumhenthall Field.

### OKLAHOMA

**ALTUS**—Corps of Engineers, Tulsa, let contract at \$121,650 to Lively Electric Co., Borger, for electric distribution system at Altus Base.  
**ALTUS**—Corps of Engineers, Tulsa, received low bid from Paul H. Nunn, Oklahoma City, at \$63,096, for gas distribution system, Altus Air Base.  
**ALTUS**—Corps of Engineers, Tulsa, let contract to S. P. Barker at \$67,500 for airman's service club, Altus Air Base.

**ARMORE**—Western Farmers Electric Cooperative received low bid of \$531,966 from B-Line Construction Co. for K.V. substation.  
**ARMORE**—Corps of Engineers, Tulsa, let contract to Holph Construction Co., Dallas, Tex., at \$153,290, for AFO shops and crash truck and fire station, Armore Air Field.

**ARMORE**—Corps of Engineers, Tulsa, let contract to Burton-Miller, Armore, at \$99,100 for officers' mess, Armore Air Field.  
**ARMORE**—Corps of Engineers, Tulsa, let contract to Walden, Fulton & Payne, Lubbock, Tex., at \$78,017 for airman's service club, Armore Air Field.

**DUNCAN**—Halliburton Well & Cementing Co. let contract to D. C. Bass & Sons, Enid, at \$423,930, for research laboratory and engineering building.

**FORT SILL**—Department of the Army announced that the Army military construction program to be undertaken for fiscal year 1953 by the Army Corps of Engineers in Oklahoma includes water tank, shop and classroom buildings, Fort Sill, \$1,286,000.

**FORT SILL**—Corps of Engineers, Tulsa, let contract to Frederickson-Parks, Oklahoma City, at \$182,565, for addition to telephone exchange and addition to cold storage plant.

**HOOVER**—Tri-County Electric Cooperative let contract to Eugene Pavlesek, San Angelo, at \$83,180, for 307.86 miles of line plus line changes, proj. Okla. 31 F&H Tex.

**MALESTER**—Navy Dept., New Orleans, La., received low bid from H. B. Nicholson, Pasadena, Calif., at \$1,544,000, Bid 1, at \$1,619,000, Bid 1-A, and at \$1,694,000, Bid 1-B, for 38 ammunition magazines, Naval Ammunition Depot.

**NORMAN**—City has preliminary plans in process for addition to Municipal Hospital, \$500,000.

**OKLAHOMA CITY**—Oklahoma Farm Bureau plans office building - \$388,000.  
**OKLAHOMA CITY**—Kerr-McGee Oil Industries, Inc., plans natural gasoline plant, \$850,000.

**STIGLER**—Cookson Hills Electric Cooperative let contract to Irby Construction Co., Jackson, at \$502,451, for 290 miles of line.

**TULSA**—Smoking Oil and Gas Co. plans six story office building at \$1,000,000.

**TULSA**—National Bank of Tulsa plans 12-story addition to building, \$1,500,000.  
**TULSA**—First Lutheran Church Congregation plans sanctuary, \$200,000.

**TULSA**—Springdale Baptist Church Congregation plans \$80,000 educational building.

### SOUTH CAROLINA

South Carolina Department of National Guard Bureau, Columbia, recommended award of contract to Fiske-Carter Construction Co., Spartanburg, at \$286,737, for armory at Weddell and Gaffney, and to George A. Creed & Son, Columbia, at \$178,752, for armory at Mullins.

Department of the Army announced following Army military construction program to be undertaken for fiscal year 1953 by the Army Corps of Engineers in South Carolina: Charleston T. C. Marine Depot, \$152,000, marine repair shops; Fort Jackson, \$182,000, recreation, classroom and office buildings, street lighting.

**ABBEVILLE**—Board of Trustees, Abbeville County Memorial Hospital, received low

bid from G. E. Moore Co., Inc., Greenwood, at \$75,650, for addition to hospital.

**ANDREWS**—Onelta Knitting Mills, Inc., let contract to Daniel Construction Co., Greenville, at \$167,000, for building.

**CHARLESTON**—Corps of Engineers let contract to C. Y. Thomason Co., Greenwood, at \$125,338, for sewage treatment plant.

**CHARLESTON**—Corps of Engineers let contract to Empire Gas Engineering Co., Atlanta, Ga., at \$132,587, for bulk fuel storage system.

**CLARENDON COUNTY**—Board of Trustees, Manning, let contract at \$308,500 to Barger Construction Co., Mooresville, for three schools.

**CLINTON**—State Training School let contract to Morris Construction Co., Greenville News Bldg., Greenville, at \$249,460, for hospital-dormitory.

**COLUMBIA**—Crescent Hill Baptist Church Congregation let contract at \$119,393 for new church building.

**CONWAY**—People's National Bank received low bid, \$83,979, from Rutledge Construction Co., Charleston, for new building.

**FLORENCE**—The Jefferson Standard Broadcasting Co. applied to Federal Communications Commission for permission to operate a 500,000 television station.

**FORT JACKSON**—Corps of Engineers, Charleston, let contract to Craig-Roberson Construction Co., Columbia, at \$136,170, for additions to tank repair shops.

**GEORGETOWN**—Mrs. Miller & Tiller let contract to Leon O. Hardee, at \$77,183, for construction of elementary school.

**GLOVERVILLE**—Board of Trustees let contract at \$162,490 to Knox Construction Co., Thomson, Ga., for elementary school.

**GREENVILLE**—Children's Center let contract to G. M. Cox & Co., Greenville, S. C., at \$119,745 for two cottages.

**GREENVILLE**—Children's Home let contract to Bailey-Brazell Construction Co., at \$77,777 for building.

**HARDEEVILLE**—Board of Trustees, Hardeeville School District 6, received low bid of \$109,545 from Faris H. H. Riddick, Ridgeland, for addition to Consolidated Colored School.

**HOLLYWOOD**—Board of Trustees, St. Paul School District 23, Charleston County, let contract at \$242,960 to Charleston Constructors, Inc., Charleston, for Baptist High School.

**JACKSON**—City has allocation of \$129,000 and loan of \$106,000 to construct new waterworks system.

**KERSHAW**—Lancaster County Board of Education received low bid of \$98,260 from Phillips Construction Co., Lancaster, for new elementary school.

**LAURENS**—First Baptist Church Congregation received low bid of \$123,538 from Cromer & Sullivan Constr. Co., Anderson, for Sunday School.

**MANNING**—Board of Trustees let contract at \$153,300 to Harlie-Quattlebaum Construction Co., Florence, for primary school.

**PARGIS ISLAND**—Navy Department, Charleston, let contract at \$96,910 to Riley Stoker Corp., Worcester, Mass., for steam generating unit and auxiliaries, Marine Corps Recruiting Depot.

**ST. HELENA ISLAND**—Board of Trustees, School District No. 1, Beaufort County, received low bid from Kinghorn Building Supply Co., Beaufort, at \$433,791, for school.

**SUMTER**—Corps of Engineers, Charleston, let contract to M. B. Kahn Construction Co., Columbia, at \$141,752 for ammunition storage, Shaw Air Base; Inv. Eng. 3.

**SWANSEA**—Board of Trustees, Swansea School District 4 received low bid of \$111,375 from C. G. Shockley Construction Co., Columbia, for elementary school.

### TENNESSEE

Veterans Administration, Washington, D. C., received apparent low bid from Blaw-Knox Construction Co., Pittsburgh, at \$782,000, Item 1, for automatic sprinkler system, Veterans Administration Hospitals, Mountain Home, Tenn.

**CHATTANOOGA**—Alamo Plaza Hotel Courts plans between 24 and 40 addition rooms, costing between \$100,000 and \$175,000.

**CHATTANOOGA**—Northside Baptist Church Congregation let contract to Verhey Construction Co., at \$194,490 for addition to church.

**COLUMBIA**—Shea Chemical Corp. granted certificate of necessity by Defense Production Administration, for elementary phosphorus and dicalcium phosphate, \$2,435,000.

**ETOWAH** — City approved issuance of \$250,000 bonds for construction of building for Blockson & Co., Michigan City, Ind.

**FAKTEE** — City let contract to J. L. Purchasing Agent, Nashville, received low bid from Bagson & Meivin, Nashville, at \$128,000 for armory for Tennessee National Guard.

**KNOXVILLE** — Corps of Engineers, Nashville, let contract at \$172,000 to Kaminer-Heigerson Co., Greenville, S. C., for POL system, McGhee-Tyson Air Base.

**KNOXVILLE** — Corps of Engineers, Nashville, received low bid of \$314,000 from W. A. Catlett Construction Co., for maintenance hangar, McGhee-Tyson Air Base.

**LEWISBURG** — City let contract to Sullivan Long & Ingerty, N. Birmingham, Ala., at \$358,965 for alterations and additions to sewage treatment plant.

**MANCHESTER** — (Coffee County Hospital Committee received low bid from Polston & Robertson, Murfreesboro, at \$345,000 for hospital.

**MEMPHIS** — Department of the Army announced that the Army military construction program to be undertaken for Fiscal Year 1953 by the Army Corps of Engineers in Tennessee includes warehouse, shop and office building, Memphis General Depot, \$369,000.

**MEMPHIS** — Navy Department, Charleston, S. C., received low bid from Consolidated Contractors, at \$208,794 for public works building, Air Station.

**MEMPHIS** — Rotary Lift Co. announced plans for \$1,000,000 plant expansion.

**NASHVILLE** — General Contracting Corp. plans moving terminal; plans call for building a new installation, \$200,000.

**NASHVILLE** — C. F. Rule Construction Co., has general contract at \$1,016,701 for medical center.

**NASHVILLE** — State received low bid from W. F. Holt & Sons, at \$24,700, Pro. 1 and from Nashville Machine & Supply Co., at \$28,830 on Pro. 2 for central heating plant.

**ROCKWOOD** — Blount County Board of Education let contract at \$230,723 to Parkview, Inc., Maryville, for Rockwood Elementary School.

**SEWANE** — University of South let contract at \$277,830 to Brice Building Co., Birmingham, Ala., for Shapard Hall dormitory.

**TULAHOMA** — Corps of Engineers let contract to M. T. Reed Construction Co., Jackson, Miss., at approximately \$388,401 for automotive repair shop, locomotive maintenance and storage building, Arnold Engineering Development Center.

**TYNER** — Herman Pechman Plumbing & Heating Co., Chattanooga, submitted low bid of \$136,263 for rehabilitation of the No. 1 power plant, Voluntary Ordinance Works.

## TEXAS

Department of the Army announced following Army military construction program to be undertaken for Fiscal Year 1953 by the Army Corps of Engineers in Texas: Fort Bliss, \$1,836,000, classroom and office buildings, laboratory, Fort Hood, \$10,000,000, shops and utilities, Red River Arsenal, Texarkana, \$375,000, shops; San Jacinto Ordnance Depot, Channelview, \$184,000, ammunition facilities; Fort Worth Quartermaster Depot, \$800,000, shop.

**ABILENE** — City plans water works improvements, cost \$1,012,900.

**ABILENE** — Elbert Hall, Jack Hughes and J. D. Perry, Jr., plan "Four Winds" activity center hotel, \$750,000.

**ABILENE** — City received low bid from H. B. Zachry Co., San Antonio at \$725,785 for Municipal Airport.

**AUSTIN** — St. David's Community Hospital, has preliminary plans in progress for 100-bed hospital, \$1,500,000.

**AUSTIN** — Board for Texas State Hospitals & Special Schools, plans 475-bed addition to Austin State School Farm Colony; \$900,000.

**BEAUMONT** — Beaumont Independent School District received low bid of \$174,180 from Farnsworth & Chambers Co., Inc., Houston, for French High School.

**BIG SPRING** — Board for Texas State Hospitals & Special Schools, Austin, plans 373-bed addition to Big Spring State Hospital, \$950,000.

**BROWNSVILLE** — City let contract to Marchant Brothers, Bayou, Mercedes at \$705,832 for Fort Brown Memorial Center.

**BRYAN** — Sisters of St. Joseph's (Sylvania, Ohio), Brenham, has plans nearing completion for hospital, \$300,000.

**CORPUS CHRISTI** — Navy Department let contract to Burnett Construction Co. at \$679,490 for aircraft storehouse, railroad access road, and paving, Naval Air Station.

**CORPUS CHRISTI** — National Lead Co., New York, let contract at \$500,000 to H. K. Ferguson Co., Houston, for plans and warehouse on Navigation Blvd.

**DALLAS** — City let contract at \$533,060 to Cole Williams for sanitary trunk sewer.

**DALLAS** — Statler Hotels, Inc., has plans in progress for hotel building, cost will be

approximately \$15,000,000.

**DALLAS** — Dallas Independent School District has final plans in progress for W. H. Gaston Junior High School, \$1,000,000.

**DENISON** — City plans water and sewer improvements; \$1,500,000 bond issue voted.

**EDINBURG** — Hidalgo County let contract to Noser Construction Co., McAllen, at \$1,248,400 for County Courthouse.

**EDNA** — Jackson County plans new Court-house, \$432,000.

**FORT HOOD** — Community Facilities Service of Housing & Home Finance Agency, Fort Worth, let contract at \$68,990 to Leslie F. Crockett Construction Co., Austin, for elementary school.

**FORT WORTH** — A. C. & J. T. Luther & Earl Wilson plans addition to shopping center, at \$1,000,000.

**GALESTON** — Galveston Wharves has plans in progress for warehouse, \$750,000.

**GALESTON** — Housing Authority received low bid of \$1,397,800 from T. C. Bateson Construction Co. for housing project, Tex. 17.

**HALTOM CITY** — City let contract at \$737,992 to F. S. Oldt & Co., Fort Worth, Contract No. 1, sewage collection system and Grimes Construction Co., Fort Worth, on Contract No. 2, sewage treatment plant, at \$222,325.

**HAMLIN** — City received low bid of \$662,840 from C. C. Rogers, Wichita Falls, for water supply line.

**HARLINGEN** — Corps of Engineers, Galveston, let contract to Ricks Construction and McFarlane Brothers, Austin, at \$422,962, Item 1, hangar, Air Base.

**HOUSTON** — City has plans near completion for storm sewer system, \$2,065,000.

**HOUSTON** — City will receive bids soon for additional apron and lengthening northeast, southwest runways and 2 new taxiways, Municipal Airport, \$500,000.

**HOUSTON** — Harris County Water & Sewer District No. 1, plans water and sewer system, \$1,500,000.

**HOUSTON** — Battelstein's department store, plans suburban store in River Oaks area, \$1,000,000.

**HOUSTON** — City let contract at \$475,967 to John G. Holland Construction Co., for Lockwood Trunk Storm Sewer, Unit No. 1.

**HOUSTON** — Trinity Lutheran Church Congregation, has working drawings in progress for church building at \$450,000.

**HOUSTON** — J. Weingarten, Inc. let contract to Austin Co., for warehouse, \$400,000.

**HOUSTON** — John I. Hill let contract to Manhattan Construction Co., for office building, \$500,000.

**HOUSTON** — Texas Southern University received low bid of \$1,195,389 from Robert E. Nesmith, for dormitory.

**HOUSTON** — Phillips Chemical Co., wholly-owned subsidiary of Phillips Petroleum Co., announced plans for 405-ton-per day triphosphoric acid plant at Adams Terminal on the Houston Ship Channel, \$3,000,000.

**HOUSTON** — City let contract at \$527,572 to Gulf Bitulithic Co., Houston, for storm sewer.

**KERRVILLE** — Board for Texas State Hospitals and Special Schools, Austin, plans Kerrville State Home Senior buildings, \$750,000.

**LAREDO** — Laredo Independent School District let contract at \$173,208 to Rambo Construction Co., Fort Worth, for junior high school.

**LIVINGSTON** — Sam Houston Electric Cooperative has REA loan of \$775,000 for 240 miles of distribution line system improvements including additional headquarters facilities.

**LUBBOCK** — Lubbock Independent School District approved \$3,000,000 bond issue for new senior high and elementary school.

**ORANGE** — First Methodist Church Congregation has final plans in progress for new church, \$400,000.

**SAN ANTONIO** — Pearl Brewing Co. let contract to F. A. Nunnelly for storage cellars extension to bottling plant, \$1,000,000.

**WEST DALLAS** — Housing Authority received low bid of \$624,617 from Austin Paving Co. for West Dallas Housing Project Paving.

**WICHITA FALLS** — Oil & Gas Building Corporation let contract to E. V. McCright & Co., Dallas, at \$400,000 for office addition.

## VIRGINIA

Virginia Advisory Hospital Council, Richmond, approved the allocation of \$5,157,966 in Federal-State matching funds during the next three years for following construction: Lynchburg General Hospital, new building at Tate Springs, \$1,193,841; Bedford County Memorial Hospital, \$397,923; Richmond Memorial Hospital, \$1,897,665; Retreat for the Sick Hospital in Richmond; Louis Obel Hospital at Suffolk; Burrell Memorial Hospital and Memorial and Crippled Children's Hos-

## Oklahoma Makes Awards for \$4,291,583 Projects

There was no hesitancy by bridge builders to go after contracts offered by the Oklahoma state highway commission in September and the low bidders took the jobs for considerably less than estimated costs.

Of the more than 30 contracts let for various types of construction, five included structural steel bridges. On a four-lane structure the low bidder cut the estimate by \$28,000.

In another instance a low bidder shaved some \$5,000 off the estimate of a structure on which the rejected low bid two months ago exceeded the estimate by nearly \$10,000.

Two hundred and sixty-three bids were received on awards amounting to \$4,291,583 that was 6.5 per cent or \$298,434 under estimates.

State Highway Director C. A. Stoldt said the letting represented one of the best in many years.

The commission placed on its early contract list construction of an estimated \$550,000 overpass at the Oklahoma City end of the U.S. Highway 66 by-pass and the Turner Turnpike.

The grade separation structure will carry U.S. 66 traffic from interference with turnpike traffic.

It is on a location on which the by-pass will be extended next year over a new three and a half mile route of 4-lane construction that will form a new route for 66 and U.S. 77.

The latter project will cost an estimated \$1,300,000 including another grade separation.

September contract awards included:

Oklahoma County—F-19(9), U.S. 77 from Oklahoma City south, 2028 miles 4-lane roadbed of variable width, 10-inch soil sub-base, 7-inch stabilized rock base, 4-inch asphaltic concrete paving, 8-foot double bituminous paved shoulders, widening existing route from 18 to 24 feet and resurfacing, bridge, estimated cost, \$132,346; low bidder, Imperial Paving Co., Oklahoma City, \$284,233; five bidders;

Cleveland County—F-112(15), U.S. 77 from Oklahoma-Cleveland county line south, 1,840 miles similar construction, estimated cost, \$297,279; low bidder, Imperial Company, \$270,900; five bidders;

Major County—SAP-93(4) Br., S.H. 8 from 3.5 miles north of Okene north to S.H. 58, 260-foot I-beam span bridge, 26 feet wide, two reinforced concrete culverts estimated cost, \$113,067; low bidder, Duard Pyle, Oklahoma City, \$108,084; seven bidders;

Craig County—SAP-163(4), U.S. 60 from Nowata county-line east, 3,037 miles 36-foot roadbed, 8-inch soil sub base, 4-inch gravel base, 6-inch stabilized rock base all 36 feet wide, 6-foot paved shoulders, 24-foot double bituminous paving, estimated cost \$143,497; low bidder, Quapaw Co., Picher, \$145,765; four bidders;

Blaine County—F-291(2) Gr. & Dr., S.H. 8 from Bucher northeast, 7,585 miles 40-ft roadbed, estimated cost \$135,983; low bidder, Clark Construction Co., Woodward, \$110,499; twelve bidders;

(Continued on page 34)

(Continued on page 32)



## Oklahoma Makes Awards for \$4,291,583 Projects

(Continued from page 31)

Blaine County—F-291(2) Gr. & Dr. Sub roads to Hitchcock and east of Hitchcock, part of above project, 1,058 miles similar construction, estimated cost \$18,323; low bidder, Clark Construction Co., \$15,216; twelve bidders;

Blaine County—F-291(2) Br., S.H. 8 from Bucher northeast, .061 mile combined length of 125-foot concrete slab span bridge, 120-foot I-beam spans bridge, both 28 feet wide, 18-inch sidewalks and 2 reinforced concrete culverts, estimated cost \$114,408; low bidder, Duard Pyle, \$99,770; thirteen bidders;

Blaine County—S-729(1) S.H. 8-A from S.H. 8 to Roman Nose State Park, 2.85 miles 32-foot roadbed, 6-inch soil sub-base, 6-inch asphaltic stabilized base, 32-foot single bituminous paving including shoulders, estimated cost \$88,843; low bidder, Smith Brothers, Noble, \$76,144; five bidders;

Bryan County—SAP-295(2), on College boulevard from U.S. 69 to North Fifth street in Durant, 268 mile, 42-foot roadbed, 8-inch soil sub-base, 4-inch sand cushion, 7-inch portland cement paving, estimated cost, \$76,558; low bidder, Smith Brothers, \$73,264; seven bidders;

Bryan County—S-460(4) S.H. 48 from S.H. 299 north to Kenefic, 5.347 miles 8-inch soil sub-base, 8-inch stabilized rock base, 22-foot double bituminous paving, primed shoulders, estimated cost \$146,393; low bidder, Park-Ward Co., Oklahoma City, \$146,310; five bidders;

Garvin County—F-382(1), S.H. 76 at Washita river south of Lindsay, .986 mile 38-foot roadbed, 24-foot gravel surface, 610-foot steel truss bridge, 28 feet wide, estimated cost \$408,267; low bidder, E. E. Barber Construction Co., Fort Smith, Ark., \$394,940; five bidders;

Beckham County—F-408(3) Gr., S.H. 73 from 9 miles east of Sweetwater east to U.S. 283, 5.480 miles 30-foot roadbed, estimated cost \$98,820; low bidder, Jones & Phillips Construction Co., El Reno, \$90,685; nine bidders;

Beckham County—F-408(3) Surf., S.H. 73 on above location, 5.480 miles 32-foot 8-inch soil sub-base, 8-inch asphaltic stabilized base, 24-foot single bituminous paving, 4-foot single bituminous paved shoulders, estimated cost \$136,745; low bidder, John Erts Construction Co., Oklahoma City, \$125,613; eight bidders;

Beckham County—F-408(3) Br., S.H. 73 on above location .031 mile combined length of 2 reinforced concrete culverts and 120-foot I-beam spans bridge, 28 feet wide with sidewalks on Long creek, estimated cost \$66,541; low bidder, Jones & Phillips, \$63,322; three bidders;

Beckham County—SAP-1039(2) (SH) Pt. 1 Gr., S.H. 55 from Carter east and south, 7.283 miles 32-55-foot roadbed, bridge, estimated cost \$143,857; low bidder, Pool Construction Co., Shawnee, \$130,661; eight bidders;

Beckham County—SAP-1039(2) (SH) Pt. 2 Gr., S.H. 55 continuation of above project to Retrop, 4.054 miles similar construction, bridge, estimated cost \$72,270; low bidder, Pool Construction Co., (Continued on page 33)

## South State Roads Bid at \$2,019,529

South Carolina's State Highway Department last month received low bids totaling \$2,019,529. Included were those for the following projects:

Calhoun County—S.C. Docket No. 9.266—F.A. Project No. FG-104(2)—(bridge work)—Route 6—the construction of a 116-foot reinforced concrete bridge over Southern Railroad in St. Matthews; F. A. Triplett, Inc., Chester, S. C., \$61,091; Wannamaker & Wells, Inc., Orangeburg, S. C., \$68,917; A. M. Tuck, Greenwood, S. C., \$70,478; C. Y. Thomason Co., Greenwood, S. C., \$71,955; Harvey H. Stewart, Charlotte, N. C., \$72,122;

Cherokee County—S.C. Docket No. 11.287—F.A. Project No. FGI-2575(3)—(Underpass)—Alternate U.S. Route 29—grading and construction of reinforced concrete piers for an underpass under Southern Railroad on Alternate U.S. Rte. 29 near Blacksburg; Robert Lee, Inc., Manning, S. C., \$16,472; C. Y. Thomason Co., Greenwood, S. C., \$17,344; A. M. Tuck, Greenwood, S. C., \$18,243; F. A. Triplett, Inc., Chester, S. C., \$19,247; Ben H. Martin, Easley, S. C., \$20,162; Harvey H. Stewart, Charlotte, N. C., \$21,680; Wannamaker & Wells, Orangeburg, S. C., \$25,355;

Cherokee County—S.C. Docket No. 11.302—F.A. Project No. FI-2575(7)—(Bridge Work)—Alternate U.S. Route 29—construction of a 360-foot reinforced concrete bridge over Buffalo Creek on Alternate U.S. Route 29 near Blacksburg; F. A. Triplett, Inc., Chester, S. C., \$92,038; Harvey H. Stewart, Charlotte, N. C., \$95,598; C. Y. Thomason Co., Greenwood, S. C., \$96,022; A. M. Tuck, Greenwood, S. C., \$98,526; Wannamaker & Wells, Inc., Orangeburg, S. C., \$101,612;

Jasper County, S. C., Chatham County, Ga.—S.C. Docket No. 27.251.2—F.A. Project No. FI-2577(1)—(Bridge Work)—U.S. Route 17—widening and reconstructing with reinforced concrete, structural steel and treated timber of the 1,467.06-foot Main Bridge (No. 7) over Savannah River on U.S. Route 17 near Savannah; McMeekin Construction Co., Cheraw, S. C., \$589,285; Wannamaker & Wells, Inc., Orangeburg, S. C., \$591,356; C. Y. Thomason Co., Greenwood, S. C., \$593,717;

Kershaw County—S.C. Docket No. 28.306—F.A. Project No. F-191(3)—(Bridge Work)—U.S. Routes 601 & 521—construction of 128-foot reinforced concrete bridge over Hanging Rock Creek on U.S. Routes 601 & 521 near Kershaw; F. A. Triplett, Inc., Chester, S. C., \$26,819; A. M. Tuck, Greenwood, S. C., \$27,130; C. Y. Thomason Co., Greenwood, S. C., \$28,924; Wannamaker & Wells, Inc., Orangeburg, S. C., \$31,906;

Anderson County—S.C. Dockets Nos. 4.375, 4.376, 4.380, 4.381, 4.382, 4.383, 4.384 & 4.391—F.A. Projects Nos. S-646(1), S-652(1) & S-653(1)—(Road Work)—Roads 93, 103, 261, 214, 159, 215, 113, 270 & 263—the grading and bituminous surfacing of 2,081 miles on Roads 93 & 103 from Route 24 to Route 24 west of Anderson; of 3,491 miles on Road 261 from Route 187 easterly to a county road; of .634 mile on Road 214 from Route 24 to Route 187; of

1.253 miles on Road 159 from Route 80 southeasterly to a county road; of 1,013 miles on Road 215 from U.S. Route 29 southerly to a county road; of .927 mile on Road 113 from Road 76 to Route 81; of .173 mile on Road 70 from Route 81 southerly to Road 101 in Homewood Park, and of 1,960 miles on Road 263 from U.S. Route 29 By-pass southeasterly to a county road; total length of project 11,532 miles; Alternate No. 2, bituminous surfacing with seal (asph. prime, asph. cem. & C-B A.M.) with 72-inch reinforced concrete pipe; Highway Surfacing Co., Greenville, S. C., \$121,125; Wham Construction Co., Anderson, S. C., \$121,853; Fox Construction Co., Inc., Lexington, S. C., \$122,897; Reeves Brothers Construction Co., Inc., Easley, S. C., \$123,585; Dickerson, Inc., Monroe, N. C., \$124,221; American Construction Co., Columbia, S. C., \$134,820; Alternate No. 2—bituminous surfacing with seal (asph. prime, asph. cem. & C-B A.M.) with 72-inch corrugated metal sectional plate pipe—12-gauge; Sloan Construction Co., Inc., Greenville, S. C., \$119,015; Highway Surfacing Co., Greenville, S. C., \$120,453; Wham Construction Co., Anderson, S. C., \$121,493; Fox Construction Co., Inc., Lexington, S. C., \$122,321; Reeves Brothers Construction Co., Inc., Easley, S. C., \$123,585; Dickerson, Inc., Monroe, N. C., \$124,221; American Construction Co., Columbia, S. C., \$134,148;

Anderson County—S.C. Dockets Nos. 4.385, 4.386, 4.387, 4.388, Parts 1&2, and 4.389—(Road Work)—Roads 198, 199, 201, 154 & 138—the grading and bituminous surfacing of 1,254 miles on Road 198 from Road 106 to Road 36 near Barnes; of 1,372 miles on Road 199 from Road 184 to Road 106; of 1,784 miles on Road 201 from Route 28 northeasterly to a county road; of 1,914 miles on Road 154 from Route 81 in Iva westerly to a county road; and of .234 mile on Road 138 from Route 81 to Road 137 in Iva; total length of project 6,558 miles; Alternate No. 2—bituminous surfacing with seal (asph. prime, asph. cem. & C-B A.M.); C. Y. Thomason Co., Greenwood, S. C., \$73,958; Wham Construction Co., Anderson, S. C., \$75,786; Highway Surfacing Co., Greenville, S. C., \$78,358; Fox Construction Co., Inc., Lexington, S. C., \$79,343; Reeves Brothers Construction Co., Inc., Easley, S. C., \$80,456; Dickerson, Inc., Monroe, N. C., \$82,780; American Construction Co., Columbia, S. C., \$83,998; Alternate No. 4—bituminous surfacing with seal (asph. prime and emulsified A.M.); Wham Construction Co., Anderson, S. C., \$75,786; Highway Surfacing Co., Greenville, S. C., \$78,358; Sloan Construction Co., Inc., Greenville, S. C., \$79,872; Reeves Brothers Construction Co., Inc., Easley, S. C., \$80,456; American Construction Co., Columbia, S. C., \$83,998;

Beaufort County—S.C. Docket No. 7.272—S.C. Access Project No. AD-2(1)—(Road Work)—Route 280—the grading and bituminous surfacing of 5,009 miles on Route 280 from a point near Burton southerly to Parris Island Marine Base; Fox Construction Co., Inc., Lexington, S. C., \$89,159; Ballenger Paving Co.,



## Bemiss Sets Opening of Salem Building



Bemiss Equipment Corp., Richmond construction and industrial equipment concern, will hold the formal opening of its new Salem, Va. building on November 7.

In addition to a display of modern heavy construction equipment, the company will serve refreshments from 5 to 6:30 at the new plant, which is located at 224 West Fourth Street. Dinner will be

from 6:30 to 8:30.

The Bemiss corporation represents Allis-Chalmers Manufacturing Co., Bucyrus-Erie Co., Inc., Chicago Pneumatic Tool Co., Detroit Diesel Engine division of General Motors Corp., the Elgin Corp., Pioneer Engineering Works and Seaman Motor Co. A number of factory representatives are expected to be present at the occasion.

Greenville, S. C., \$92,066; Espy Paving & Construction Co., Savannah, Ga., \$97,888; Robert Lee, Inc., Manning, S. C., \$103,161; J. F. Cleckley & Co., Orangeburg, S. C., \$104,067; Sloan Construction Co., Inc., Greenville, S. C., \$108,413; Banks Construction Co., Inc., Naval Base, S. C., \$109,552; Dickerson, Inc., Monroe, N. C., \$110,032.

Beaufort County—S.C. Dockets Nos. 7,280 & 7,281—(Road Work)—Roads 91 through 97, 68, 98 through 101, 105, 106, 107 & 109—the grading and bituminous surfacing of 1.767 miles on Roads 91 through 97, being streets in the Town of Port Royal, and of 3.811 miles on Roads 68, 98 through 101, 105, 106, 107 & 109, being streets in the City of Beaufort; total length of project 5.578 miles; Fox Construction Co., Inc., Lexington, S. C., \$105,630; Ballenger Paving Co., Greenville, S. C., \$105,636; Sloan Construction Co., Inc., Greenville, S. C., \$108,469; Dickerson, Inc., Monroe, N. C., \$113,104; J. F. Cleckley & Co., Orangeburg, S. C., \$134,176; Espy Paving & Construction Co., Savannah, Ga., \$134,497.

Dorchester County—S.C. Dockets Nos. 18,268, 18,269, Parts 1&2, and 18,271—F.A. Projects Nos. S-280(2), S-695(1) & S-696-(1)—(Road Work)—Roads 19, 173 and 28—the grading and bituminous surfacing of 2.178 miles on Road 19 from end of pavement southwest of Ridgeville southwesterly; of 2.052 miles on Road 173 from Road 19 in Ridgeville southerly; and of 4.145 miles on Road 28 from Road 55 southeasterly to Road 51; total length of project 8.375 miles; Alternate 2—bituminous surfacing with seal (asph. prime, asph. cem. & C-B A.M.), Banks Construction Co., Naval Base, S. C., \$98,124; Hubbard Construction Co. of S.C., Inc., Marion, S. C., \$109,722; Fox Construction Co., Inc., Lexington, S. C., \$111,540; W. M. Reagan & Sons, Inc., Columbia, S. C., \$113,597; Robert Lee, Inc., Manning, S. C., \$116,295; Highway Surfacing Co., Greenville, S. C., \$116,622; J. F. Cleckley & Co., Orangeburg, S. C., \$121,638; Dickerson, Inc., Monroe, N. C., \$136,456.

Greenville County—S.C. Dockets Nos. 23,320 & 23,336—F.A. Project No. S-544(1)—(Road Work)—Roads 42 & 131—the grading and bituminous surfacing of 2.828

miles on Road 42 from U.S. Route 25 southeasterly to Route 11; and of 2.660 miles on Road 131 from Road 89 northeasterly to U.S. Route 276 southeast of Marietta; total length of project 5.488 miles; Alternate 2—bituminous surfacing with seal (asph. prime, asph. cem. & C-B A.M.); Suber & Co., Inc., Whitmire, S. C., \$134,024; B. L. Jones & Co., Winder, Ga., \$145,595; Ballenger Paving Co., Greenville, S. C., \$146,007; Dickerson, Inc., Monroe, N. C., \$152,051; Fox Construction Co., Inc., Lexington, S. C., \$152,587; Sloan Construction Co., Inc., Greenville, S. C., \$174,653; Peden Constr. Co., Inc., Greenville, S. C., \$184,640.

Jasper County—S.C. Docket No. 27,254—F.A. Project No. S-672(1)—(Road Work)—Route 170—grading and bituminous surfacing of 9.681 miles on Route 170 from Route 128 northerly to U.S. Route 17 near Coosawhatie; Alternate 2—bituminous surfacing with seal (asph. prime, asph. cem. & C-B A.M.); American Construction Co., Columbia, S. C., \$140,764; Hubbard Construction Co. of S. C., Inc., Marion, S. C., \$144,333; Knox Brothers, Inc., Thomson, Ga., \$146,610; Ballenger Paving Co., Greenville, S. C., \$148,112; Fox Construction Co., Inc., Lexington, S. C., \$149,678; Dickerson, Inc., Monroe, N. C., \$163,568; J. F. Cleckley & Co., Orangeburg, S. C., \$170,554.

Kershaw County—S.C. Docket No. 28,304—F.A. Project No. U-46(3)—(Road Work)—U.S. Route 1—grading and asphaltic concrete surfacing and construction of concrete curb and gutter and sidewalk of 589 mile on U.S. Route 1 (DeKalb Street) in Camden from Gordon Street to Lytleton Street; Cherokee, Inc., Columbia, S. C., \$100,249; Sloan Construction Co., Inc., Greenville, S. C., \$102,250; Ballenger Paving Co., Greenville, S. C., \$118,978; Fox Construction Co., Inc., Lexington, S. C., \$125,979.

McCormick County—S.C. Dockets Nos. 33,266, 33,267, 33,268 & 33,269—(Road Work)—Roads 21, 65, 86 & 1142—grading and bituminous surfacing of 3.399 miles on Road 21 from Road 22 northerly to Road 66 near Bethany Church; of 1.146 miles on Road 65 from Road 33 northerly; of .996 mile on Road 86 from Road 22 northerly, and of .664 mile on Road 142

from Route 283 southerly to Rehobeth Baptist Church; total length of project 6.205 miles; Alternate No. 2—bituminous surfacing with seal (asph. prime, asph. cem. & C-B A.M.); Roy E. Brewer, Lancaster, S. C., \$77,696; Ballenger Paving Co., Greenville, S. C., \$81,804; American Construction Co., Columbia, S. C., \$84,444; B. L. Jones & Co., Winder, Ga., \$86,195; Fox Construction Co., Inc., Lexington, S. C., \$86,905; C. Y. Thomson Co., Greenwood, S. C., \$88,376; Dickerson, Inc., Monroe, N. C., \$99,907; Alternate No. 4—bituminous surfacing with seal (asph. prime and emulsified A.M.); Ballenger Paving Co., Greenville, S. C., \$81,804; American Construction Co., Columbia, S. C., \$84,444; B. L. Jones & Co., Winder, Ga., \$86,195; Wham Construction Co., Anderson, S. C., \$87,488; Sloan Construction Co., Inc., Greenville, S. C., \$87,949; C. Y. Thomson Co., Greenwood, S. C., \$88,376;

Oconee County—S.C. Dockets Nos. 37,331, 37,332, Parts 1&2, 37,333, 37,334 & 37,335—(Road Work)—Roads 176, 181, 97, 58, 212, 213, 211 & 133—the grading and bituminous surfacing of 1.591 miles on Road 176 from Route 28 west of Walhalla southerly to Road 36 with spur to Route 28; of 1.473 miles on Road 181 from Road 164 in Walhalla northerly to Road 59; of .556 mile on Road 97 from Road 36 to Road 146 near Walhalla; of 1.318 miles on Road 58 from Route 183 to Road 58 north of Walhalla, and of 1.259 miles on Roads 212, 213, 211 & 133, being streets in West Union; total length of project 6.197 miles; Alternate No. 2—bituminous surfacing with seal (asph. prime, asph. cem. & C-B A.M.), Wham Construction Co., Anderson, S. C., \$78,105; Highway Surfacing Co., Greenville, S. C., \$78,945; B. L. Jones & Co., Winder, Ga., \$79,157; Peden Construction Co., Inc., Greenville, S. C., \$79,948; Dickerson, Inc., Monroe, N. C., \$80,099; Fox Construction Co., Inc., Lexington, S. C., \$82,407; American Construction Co., Columbia, S. C., \$86,384; Alternate No. 4—bituminous surfacing with seal (asph. prime and emulsified A.M.), Wham Construction Co., Anderson, S. C., \$78,105; Highway Surfacing Co., Greenville, S. C., \$78,945; B. L. Jones & Co., Winder, Ga., \$79,157; Sloan Construction Co., Inc., Greenville, S. C., \$80,469; American Construction Co., Columbia, S. C., \$86,384.

Orangeburg County—S.C. Dockets Nos. 38,375, Parts 1&2, and 38,380, Parts 1&2—F.A. Projects Nos. S-496(2) & S-642(1)—(Road Work)—Roads 73, 108 & 159—the grading and bituminous surfacing of 7.730 miles on Road 73 from Route 4 east of Neeses northerly to U.S. Route 178, and of 1.679 miles on Roads 108 & 159 from U.S. Route 178 in North, westerly to Route 394; total length of project, 9.409 miles; Alternate No. 2—bituminous surfacing with seal (asph. prime, asph. cem. & C-B A.M.), W. M. Reagan & Sons, Inc., Columbia, S. C., \$95,454; Mid-State Construction Co., Inc., Batesburg, S. C., \$100,112; J. F. Cleckley & Co., Orangeburg, S. C., \$100,862; Banks Construction Co., Inc., Naval Base, S. C., \$101,895; Fox Construction Co., Inc., Lexington, S. C., \$102,270; Knox Brothers, Inc., Thomson, Ga., \$103,788; Dickerson, Inc., Monroe, N. C., \$105,788.

(Continued on page 33)

# Patuxent Cited as Modern Naval Shore Station



*Above—Earthmoving equipment being operated by Williams Construction Co. on the \$2,282,879 runway extension project includes the No. 80 Caterpillar pan shown at the left, two LaPlant-Choate pans, all drawn by Caterpillar tractors, and eight 14-yard Euclid "belly-dump" trucks like that one shown at the right. These latter are being filled by a Euclid elevator-loader pulled by a Caterpillar T20 tractor.*

Cedar Point, a 6,000-acre stretch of southern Maryland ensconced between the Patuxent River and the Chesapeake Bay, in addition to being the hundred million dollar home of the Navy's ultra-secret air test center, is what the Sea Force considers one of the best examples of its newest shore establishments.

There, on a site which at places is some six miles long, the Navy's Civil Engineer Corps, famed as officers of the widely proclaimed "Sea Bees" who performed magnitudinous and difficult construction feats in the recent world conflict, have transformed a peaceful rural countryside into a pattern of buildings, runways and facilities that rivals any similar installation yet built.

The Patuxent station is considered so modern that the Navy's Bureau of Yards and Docks is drawing up master development plans for others like it that may be required in the future. Staff members of that bureau, usually referred to in naval circles as "BuDocks," are the Civil Engineer Corps. These are the officers responsible for the design, construction and maintenance of such projects.

When the Cedar Point tract was taken over by the Navy early in 1942, it was about one-half wooded; the rest farmland except for several small summer colonies that had sprung up along the shore. The town of Pearson was at the approximate center of the area. A historical estate called Mattapan was located within its boundaries. Helen Hayes, the actress, was one of the summertime residents.

Within one decade, BuDocks engineers have changed the St. Marys county peninsula into a busy experimental center and air station, with big hangars and laboratories, runways, including one 10,000 feet long, a railroad extending 45 miles to connect with the Pennsylvania at Brandywine, barracks and officers' quarters, housing projects, 56 miles of roads and a 147-mile drainage system. The water works supplies an average of 1,600,000 gallons daily. Steam and diesel generating plants stand by in event of failure of the outside power supply.

Layout of the Patuxent station is on the dispersal idea. This means the planned scattering of buildings, fuel dumps and ammunition storage; the

gridding or criss-crossing of electric lines and other utilities; the interconnection of roads. Purpose of this dispersal is to avoid being "bombed out" in time of war.

Initial Patuxent construction includes: site preparation, dredging, filling and grading, and building a bulkhead. A breakwater to enclose the seaplane mooring basins is 6,000 feet long, part of cellular concrete and part earth fill. Taxiways and runways, which are now being extended, total 1,564,000 square yards. There presently are more than 900 buildings. Seventy boiler rooms are operated to heat the various buildings.

One of the projects that taxed BuDocks ingenuity was the electronics test hangar. The \$2,000,000 project is completely lined with a metal mesh to free it of outside electrical disturbances. Four miles of soldering bonds the shield into one screen system. An extra inside set of doors was installed to insure the seal.

The hangar has steel arches. It is covered with cement asbestos board and has a span of 300 feet, an overall depth of 178 feet and is 67 feet high. A 79-foot long bay will accommodate long-nosed

planes. The concrete floor will bear a single wheel load of 120,000 pounds. Tuller Construction Co., of Red Bank, N. J., erected the building; C. J. Langenfelder and Son, Baltimore, did the outside work, including the parking apron, taxiways and access roads.

Two major projects are now under construction at the Patuxent station. One is a \$2,596,320 contract for the H-8 hydraulic catapult now about one-third finished by Ayers-Hagan-Booth, Inc., of Providence, R. I., and the other a \$2,282,879 contract for extending a 6,400-foot runway to 14,000 feet. This is being done by Williams Construction Co., of Middle River, Baltimore.

Catapults already installed in the Patuxent test center are of insufficient length and unable to develop the power to heave a modern high-speed plane into flight. The new catapult, designated the H-8, will have both the length and the power to enable a modern plane to reach flying speed before reaching the end of the 297-foot shuttle. Modern aircraft carriers have the same type catapult.

The H-8 project is being built at the end of a 6,400-foot runway. Its visible section upon completion will be the shuttle at runway level. Below ground will be the 150 by 41-foot main equipment vault with its thick concrete walls to resist the tremendous force of the hydraulic ram and the 27 by 95-foot vault to house the auxiliary equipment.

Cost of the equipment to be installed approximates \$1,500,000. Included will be four 100-horsepower motors and four 4,000-pound oil compressors. The machinery will weigh thousands of tons, with the ram plunger alone accounting for 500 tons.

Air-entrained waterproof concrete was used in building the vault walls and machinery foundations. Seventy-foot piles are battered against the wall at the business end of the ram to resist the tremendous force. For each foot of ram movement, the shuttle track will move ten feet.

Comdr. E. J. Quinn, public works officer and resident representative in charge of construction for the Bureau of Yards and Docks, has announced that a second catapult will soon be placed under construction. Bids will be received within

*Below—Comdr. E. J. Quinn, public works officer at the Patuxent River center, discusses the program with Capt. A. D. Hunter, deputy chief of the Bureau of Yards and Docks, (left) and Capt. C. W. Porter, district public works officer, Potomac River Naval Command.*



the next three months for the project, which will be steam driven.

The new runway extension is where the Williams concern is now grading with a Euclid bucket loader, eight Euclid "belly-dump" trucks, two LaPlant-Choate and one Caterpillar pan, the latter three drawn by Caterpillar diesel tractors. The loader is scooping up the black dirt at the rate of about one fourteen-yard truck full a minute.

Upon completion of the extension, the runway will be one of the longest. Work to be done includes top soil removal, excavation, filling and stabilization of the sub-base, installation of necessary drainage facilities, and a 10-inch slab of concrete covering the 7,600-foot long by 300-foot wide extension. A taxiway will double back along the north side for 9,200 feet. It will be 100 feet wide.

Froehling & Robertson, of Richmond, Va., are designing the concrete mix. The concrete is to take a single wheel load of 50,000 pounds at 100-pound tire pressure. Flexural stress is set at 700 pounds, or the equivalent of 5,000-pound concrete.

The problem in the Southern Maryland area is aggregate. Present plans of the contractor are to use slag. This will be brought in by water by the Arundel Corp. and discharged into an elevated loading bin near the middle of the contract area.

The Patuxent station has two family housing developments—Lexington Park and Carver Heights. These provide all but 12 of the 480 rental quarters available. An additional 1,000 units are being erected under the Wherry program by Cottage Construction Co., Inc., of River Edge, N. J. Existing quarters provided by the government total 785.

The Cottage project is among the eight largest being carried out under the Navy-wide Title VIII program. It is one of 79, of which 24 providing a total of 12,270 units are under way.

Contracts in the recent program at the Patuxent station, in addition to the catapult and runway projects, include the following:

NOY 19314, Spec. 23055, repairs to turntable, \$236,432, started Nov. 22, 1949, 85 per cent finished, Neil MacDonald, Silver Spring, Md., contractor;

NOY 28068, Spec. 29749, high explosive magazine, \$47,000, Neil MacDonald, Silver

Spring, contractor, finished;

NOY 70524, Spec. 32113, additional storage for supply, \$26,089, started March 10, 1952, 97 per cent finished, Roland B. Duke, Leonardtown, Md., contractor;

NOY 75046, Spec. 32125, additions to sewage disposal, \$56,206, started Nov. 26, 1951, 80 per cent finished, Rogers & McGrath, Inc., Washington, contractor;

NOY 70551, Spec. 32140, repairs to apron, Building 312, \$18,965, started Feb. 6, 1952, 95 per cent finished, Neil MacDonald, Silver Spring, contractor;

NOY 70564, Spec. 32153, relocation of Davis Road, \$13,635, started Feb. 6, 1952, 95 per cent finished, Neil MacDonald, Silver Spring, contractor;

NOY 70569, Spec. 32158, mechanical ventilating for barracks, \$74,791, started May 3, 1952, 70 per cent finished, Charles F. Cox, Inc., Silver Spring, contractor;

NOY 70603, Spec. 32192, new construction and facilities, \$139,995, started March 26, 1952, 20 per cent finished, Atlantic States Construction Corp., Arlington, Va., contractor;

NOY 71162, Spec. 32716, aviation fuel storage, \$447,000, started June 24, 1952, five per cent finished, Cayuga Foundation Corp., New York, contractor;

NOY 71697, Spec. 33100, repairs to runway lighting, \$47,900, started June 19, 1952, E. C. Ernst, Inc., Washington, contractor;

NOY 71699, Spec. 33102, carrier approach facilities, W. F., \$65,983, started March 10, 1952, Rogers & McGrath, Inc., Washington, contractor; 70 per cent finished;

NOY 71711, Spec. 33114, armament test and storage facilities, \$92,000, Atlantic States Construction Corp., Arlington, Va., contractor, started May 26, 1952, 40 per cent finished;

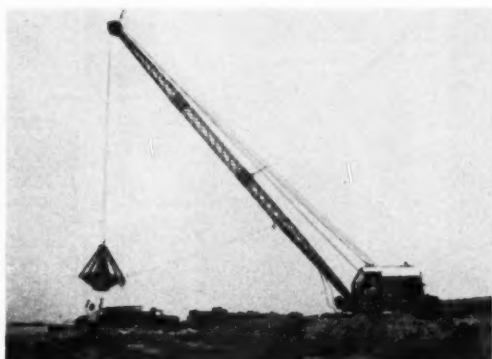
NOY 71727, Spec. 33130, painting dwellings, Lexington Park and Carver Heights, \$26,531, started May 15, 1952, 30 per cent finished, Rello Corp., Philadelphia, contractor;

NOY 71730, Spec. 33133, blast barrier for E. T., \$6,620, started April 1, 1952, finished, Roland B. Duke, Leonardtown, contractor;

NOY 73328, Spec. 34454, repairs to chimneys, Lexington Park, \$9,983, started May 15, 1952, Brinker Brothers & Co., Washington, contractor; 95 per cent finished;

NOY 73329, Spec. 34455, gutters, downspouts and splashblocks, Lexington Park and Carver Heights, \$10,174, started May 15, 1952, 60 per cent finished, Gichner, Inc., Washington, contractor;

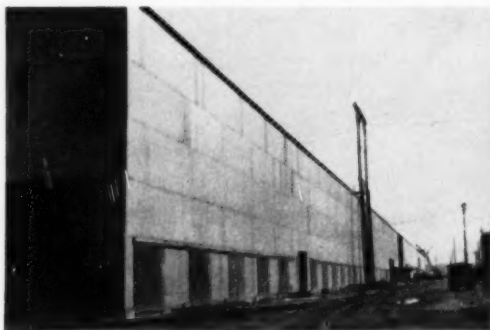
NOY 73330, Spec. 34456, rehabilitation of gas distribution system, Lexington Park, \$45,124, started May 15, 1952, 10 per cent finished, H. Emerson Thomas & Associates, Inc., Westfield, N. J., contractor.



Above—Byers crane, powered by Buda engine, operating five-eighth-yard clamshell bucket, excavates sleepers for septic tank at Patuxent air test center.

Below—Left—A \$2,596,320 hydraulic catapult to heave big jet planes into flight is the largest project being undertaken at the Patuxent center. The 297-foot shuttle extends at the right. Within the concrete walls will be located the 100-horsepower motors and 4,000-pound oil compressors which will power the catapult. Walls at the far end are reinforced with batter piles to resist the thrust of the giant ram to be installed. Right—Northwest shovel being operated by Ayers-Hagan-Booth, Inc., of Providence, R. I., contractors for the catapult. A second similar project will soon be placed under contract.





*Above—The hot strip mill being built under Armco's \$35,000,000 expansion at Ashland, Ky. is windowless to reduce replacement and maintenance costs. The view at the right shows the concrete footings and the Zincgrip sheets, an Armco product, being placed on the structural steel of the 1,946-foot long building. McGraw Construction Co., of Middletown, Ohio, is the contractor.*

## **\$35,000,000 Armco Expansion Near Completion**

Begun in January, 1951, the expansion program at the Ashland, Ky., plant of Armco Steel Corp. is scheduled for completion in February, 1953.

Prime contractor is the McGraw Construction Co. of Middletown, Ohio. About 1,000 men are assigned to the job.

Total cost of the work will run \$35,000,000, with \$15,000,000 going into construction and \$20,000,000 into new equipment.

Armco is building a complete new hot strip mill at the Ashland location, as well as adding a seven bay extension to the present mould yard building and erecting several smaller buildings.

The major building of the hot strip mill, which will house all rolling mill equipment, is 1,946 feet long and 80 feet wide.

More than \$1,000,000 was spent on preparation of the site. All main water, gas, and electric lines were relocated and several mill buildings were moved. The

plant hospital, a large Armco Steelex building, was moved more than 1,000 feet, while hospital personnel continued working with all equipment functioning. Two large shearing lines were relocated in adjoining buildings.

In addition to the major building, a new wash room and locker room for employees is being constructed, along with an outdoor substation to handle power for mill motors and auxiliary equipment.

The substation has a capacity of 40,000 volts, and incoming power will reach it at 33,000 volts. Due to space limitations, the five towers carrying outgoing lines were built into the central structure. Current will be distributed to main mill equipment at 6,900 volts.

A new warehouse building is also being constructed, together with a gatehouse and two Armco Steelex office buildings—size 156 feet by 36 feet and 135 feet by 36 feet.

Standard steel mill construction prac-

tices are being used, with roofing and siding of Armco Zincgrip corrugated sheets.

When the job is completed, about 5,100 tons of steel will have gone into construction and more than 50,000 cubic yards of concrete poured.

Equipment weighing 25,000 tons is now being installed in the hot strip mill. Starting with ingots heated to 2,200 degrees Fahrenheit in the "soaking pits," the mill will roll them into slabs and then into plates and sheets in a continuous operation. The steel being rolled will pass through twelve individual mills equipped with electric drive motors totaling 49,500 horsepower.

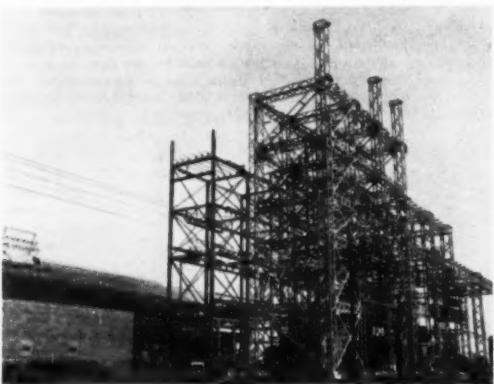
For cooling purposes, enough water to supply a city of 500,000 population will be drawn from the Ohio River. Extensive new pumping equipment is being installed to meet this demand.

Ten overhead cranes, ranging up to 75 tons capacity, will service the hot strip mill area.

Most of the heavy equipment in the mill area has been set. Current plans are to schedule some of these units for trial operation by October 20.

Full operation at the new mill is expected by next February 15.

*Below—Outdoor substation built to handle power for the new hot strip mill. It has a capacity of 40,000 volts. Current will enter at 33,000 volts and be distributed at 6,900 volts. Space limitations necessitated five towers carrying outgoing lines being incorporated in the central structure.*

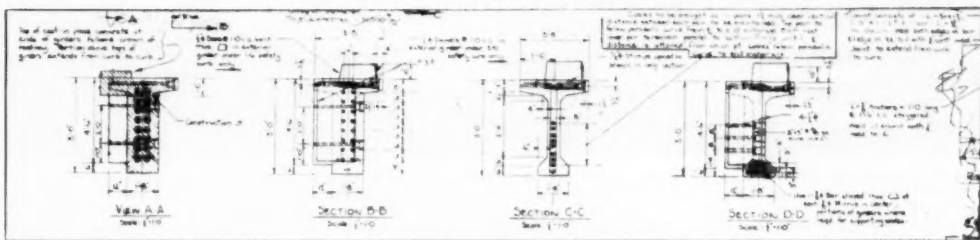


### **Florida Agency Named to Handle Dumpcretes**

The manufacturing division of Maxon Construction Co., Inc., Dayton, Ohio, has appointed Vern Wheeler Equipment Co., Inc., with headquarters at the foot of Florida Avenue, Jacksonville, Fla., to handle the sales and servicing of Dumpcrete bodies in northern Florida, this including the counties west to and including those bordering the Apalachicola River, south to and including Levy, Marion, Sumter, Lake, Orange and Brevard counties.

The Dumpcrete is a specially designed, high discharge steel truck body for hauling air-entrained concrete without agitation. It has a baffle and gate that can be removed for hauling dry materials.

# Maryland Prepares to Build Pre-Stressed Span



Above—Cross-sections of pre-stressed girders to be used in new Shawan bridge over the Harrisburg-Baltimore expressway. The one at the left shows arrangement of the cables at the anchor ends of the girders; the one at the right, arrangement of cables at middle of the girders. This latter is a four, six, six group, with the smaller number in the top row. Plans were made under supervision of Albert L. Grubb, engineer of bridge design.

Maryland will soon start constructing a highway bridge with the second longest pre-stressed girders in the United States. Projected on a route that eventually will connect Baltimore, Maryland's metropolis, with Harrisburg, capital of Pennsylvania, the bridge will span Shawan Road approximately one mile west of Marble Hill.

Eight bids ranging from \$77,400 to \$122,708 were received late last month for construction of what will be the Maryland State Road Commission's first structure of the pre-stressed variety. Bonwit Construction Co., Inc., of New York, submitted the low proposal. Three other out-of-state contractors and four Maryland firms, none of whom has built a pre-stressed structure, participated in the competition.

Nine girders will make the Shawan bridge a new venture in Free State highway department history. These are the pre-stressed members of the bridge structure and will be one hundred and two feet six inches long, with a five foot depth. They will be in the form of a "I" cross section. Their designs were prepared in Maryland's bridge division under supervision of Albert L. Grubb, state engineer of bridge design.

The top flange of the girders, or what would correspond to the upper cross-

stroke of the "I" will be three feet eight inches wide and eight inches thick. Stem of the "I" or the web as it is called in engineering circles will be eight inches thick. The bottom flange, this resembling the bottom stroke of the "I" will be one foot eight inches wide. Its depth will approximate nine inches.

Sixteen cables, each containing twelve wires about three-sixteenths (0.196) of an inch in diameter, will be used to pre-stress the concrete longitudinally in much the same manner as a set of books would be compressed between the hands to lift it from one location to another. The wires will be sheathed in metal tubing of the BX electrical type.

In the finished bridge, the girders will rest on abutments 38 feet two inches long, six feet two inches wide and four feet deep, each abutment in turn founded on fourteen steel H-piles (12 BP 522). The contractor can either cast the girders in place across the abutments or cast them elsewhere and lift them into position after inserting and pre-stressing the wires. The one would involve falsework; the other, a difficult lift of the 50-ton girders due to the limited area of the roadway below.

Extreme accuracy is specified in building the girder forms. These may be of a thick plywood, or of lumber, with stud

supports not farther apart than sixteen inches in the former. If lumber is used the contractor must still use plywood liner. The abutments are to be formed with either tongue and groove lumber or plywood.

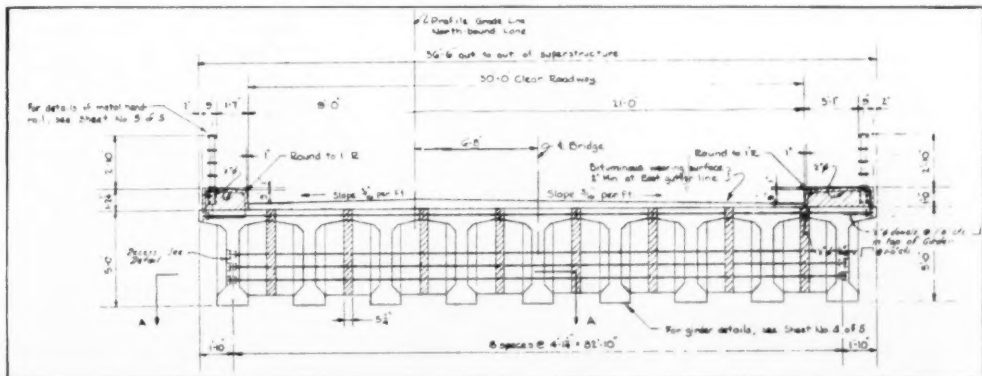
After the forms are built and the cable ducts positioned a special mix of concrete is to be poured and vibrated both internally and externally. The concrete is to be poured at a rate sufficient to avoid feathered edges in the bottom flange or any tendency toward diagonal joints. Each girder must be poured and completed on the same day as commenced.

Side forms for the girders must not be removed until two days after the pouring process. When the side forms are stripped from the concrete, it is to be covered with burlap and a water spray or perforated pipe laid down the top so water will seep onto the burlap and girder to keep it saturated for four days. The total curing period is to be seven days.

The special mix is described in the specifications as "pre-stressed concrete." It is to have a minimum of eight and one-half bags of cement per cubic yard and shall have a minimum compressive strength of 5,000 pounds per square inch in twenty-one days. Maximum size of aggregate is to be three-quarters of an inch.

(Continued on page 32)

Below—Typical section through the floor of the proposed bridge. Concrete will be poured between the diaphragms and top flanges after the girders have been pre-stressed and in their final positions.







Above—Among the more than \$73,600,000 in military projects being done by the Louisville district of the Corps of Engineers are the buildings shown above. At the left are the 225-man barracks at Fort Campbell, Ky., one of eight such buildings being erected there. They are 265 by 39 feet with a 112 by 36-foot wing and have a concrete frame with concrete block curtain walls. Cost is approximately \$2,900,000. Southeastern Construction Co., of Charleston, W. Va., is the contractor. Contractor for the permanent troop housing shown in the picture at the right is J. W. Bateson Co., Inc., of Dallas, Texas. Also located at Fort Campbell, the project includes 34 enlisted men's barracks for 225 men each; eight 165-man enlisted men's barracks; four 25-man bachelor officers' quarters; 11 battalion headquarters; three regimental headquarters; 11 motor repair shops; one carpenter and paint shop; a utility shop; a communications building, three warehouses, a fire station and guard house. Cost will be \$21,000,000.

## Louisville District Scene of \$73,600,000 Project

Expenditures in excess of seventy-three and one-half million dollars are represented by the military projects now being carried out under supervision of the Louisville district of the Corps of Engineers. Located at seven posts in two states, the projects, as announced by Lt. Col. R. P. Tabb, executive officer of the Louisville district, include the following:

### Fort Knox

**Permanent Troop Housing**—Contractor: Southeastern, Loving & Doyle & Russell, Charlotte, N. C. project includes thirty-two 225-man barracks, four 165-man barracks, five 105-man barracks, three regimental headquarters buildings, six battalion headquarters buildings, four 25-man bachelor officer quarters, nine motor repair shops, two motor dispatch offices, warehouse space, and fire station. Additions to cold storage plant, paint shop, and all necessary roads and utilities are also included. Construction is reinforced with concrete block walls and partitions. The work is scheduled for completion in December 1953. Contract cost is approximately \$22,700,000.

**Armored Center Academic Building**—Contractor: John Wile Construction Co., Louisville, Ky. The building is of structural steel with concrete masonry unit walls. The structure is T-shaped, 2-story, having an area of approximately 40,000 square feet. The estimated completion

date is January 1953. Approximate cost is \$605,000.

**Post Signal Center Building**—Contractor: Wehr Construction Co., Louisville, Ky. This is a reinforced concrete frame building with concrete masonry unit walls. The building is 2-story, having an area of approximately 9,600 square feet. The estimated completion date is November 1952. Approximate cost is \$294,000.

**Concrete Magazines**—Contractor: I. Bush & Sons, Louisville, Ky. The work consists of construction of twelve 26 feet 6 inches by 81 feet reinforced concrete, arch type storage magazines. Estimated completion date is October 1952. Approximate amount of contract \$379,000.

**Test Wells and Rehabilitation and Expansion of Water Supply Facilities**—Contractor: Diehl Pump & Supply Co., Louisville, Ky. As a prerequisite to rehabilitation and expansion of water supply facilities, which constitute one of the most important utilities at Fort Knox, three test wells were installed for the purpose of more fully exploring and studying the available sub-surface water supply. Information derived from the test well installations was utilized to design the expanded facilities and as a guide for the design of future water supply facilities. The test wells themselves will also yield additional permanent water supply

for Fort Knox and along with the rehabilitation and expansion facilities will serve to alleviate a critical water shortage at this military establishment. Contracts amount to approximately \$125,000. Completion date is scheduled for October 1952.

**Alterations to Cantonment Hospital**—Contractor: Kenhill Construction Co., Charleston, W. Va. The work consists of alterations and additions to six existing mobilization type hospital buildings to provide additional hospital facilities, including obstetrical ward, pre-natal clinic, addition to mess hall, alterations to administration building and office building. Work is scheduled for completion in January 1953. Approximate amount of contract \$136,000.

### Lexington Signal Depot, Lexington

**Warehouses**—Contractor: Derby & Perkins, Louisville, Ky. The work consists of construction of two permanent type warehouses, 200 feet by 1200 feet. The buildings will have steel beam and girder roof framing, concrete block walls and firewalls and concrete foundations and floor. They will also have sprinkler systems. Completion is scheduled for February 1953. Approximate amount of contract \$2,835,000.

**Signal Maintenance and Repair Shop**—Contractor: Struck Construction Co., Louisville, Ky. The work consists of the construction of one steel and masonry building, 362 feet by 260 feet. Scheduled completion date is November 1952. Approximate amount of contract \$1,157,000.

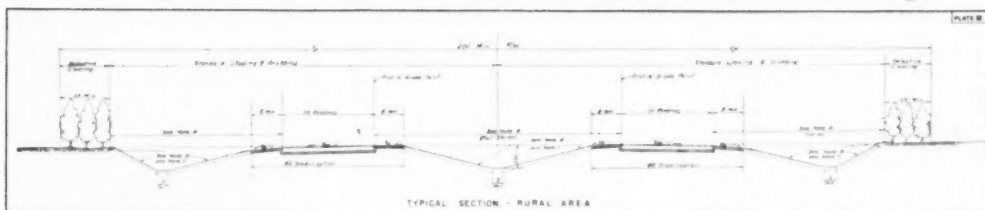
**Fire Station, Cable Processing Building and Salvage Building**—Contractor: Gilson Construction Co., Lexington, Ky. The fire station, 66 feet by 120 feet, is of concrete block and concrete frame construction, with concrete roof decking. The cable processing building, 80 feet by 100 feet, is of concrete block and structural steel frame construction, steel roof decking, heavy wood sliding exterior doors. The salvage building, 80 feet by 120 feet is similar to the cable processing building. Estimated completion date is November 1952. Approximate amount of con-

(Continued on page 51)

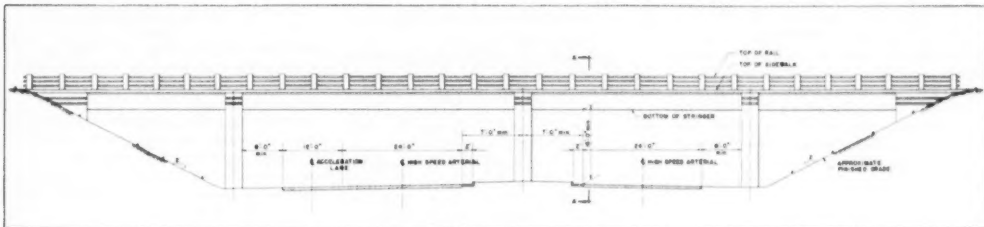
Below—The post signal center at Fort Knox will cost \$294,000 and is being erected by Wehr Construction Co., of Louisville. The structure has a reinforced concrete frame with concrete masonry unit walls. It will be two stories high and contain approximately 9,600 square feet.



# Turnpike Outlined in Florida Road Survey



Above is a typical roadway section on the 315-mile turnpike engineers have suggested be built from near Jacksonville to Miami and Daytona Beach to the west coast of Florida. Below is shown a typical interchange structure.



Florida will have a high-speed, limited access turnpike extending almost its entire length and breadth, if state authorities follow the recommendations of Parsons, Brinckerhoff, Hall & MacDonald, New York engineering firm which recently made a study of roads on the big

southeastern United States peninsula. The 315-mile lengthwise expressway would connect the Jacksonville expressway system, now under construction, with a point just north of Miami; the cross-state branch would run generally from midway between Daytona Beach and Titus-

ville to the west coast near Clearwater, thus tying in with highways in the Tampa-St. Petersburg area.

Traffic entering Florida in the vicinity of Jacksonville will use the expressway now being built, crossing the St. Johns River at either the Arlington or Interstate bridges and continuing to the northern terminus of the proposed toll highway. The East Coast would then be followed generally in a southeasterly direction to the Miami connection. Sixteen traffic interchanges would include the north and south terminals.

The proposed East Coast route passes west of St. Augustine, continues south and west of Bunnell, west of Ormond, Daytona Beach, Port Orange, New Smyrna Beach, Oak Hill, Titusville, Indian River City, Cocoa, Bonaventure, Eau Gallie, Melbourne, Grant, Vero Beach, Fort Pierce, Stuart, Jupiter and West Palm Beach.

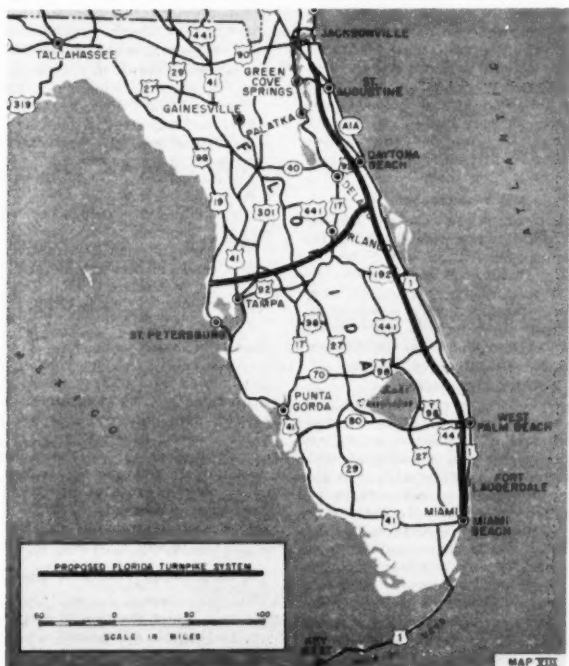
From the vicinity of West Palm Beach, the proposed route would continue southerly and west of the railroad but east of Route 441. Generally parallel with this route, the turnpike location would continue southerly and west of Delray Beach, Boca Raton, Pompano and Fort Lauderdale to its southern terminal.

Length of the cross-state branch will approximate 128 miles. This stretch would be close to Orlando, Kissimmee, Haines City, Winter Haven, Lakeland, Plant City and Tampa. Nine traffic exchanges along the cross-Florida branch would be located to serve all important communities and intersecting highways in the region.

The selected route is aimed at serving the most important movements of traffic in Florida. In addition, it would relieve frequent near-capacity congestion on some of the most heavily traveled trunk-

(Continued on page 50)

Below—Route of the proposed Florida Turnpike, with its east-west leg.



## General Contractors Nominate Street

Relationships between general contractors and subcontractors were studied and the association's position was restated; significant industry developments were reported, and the association's program was reviewed and approved at the mid-year meeting of the governing and advisory boards of Associated General Contractors of America, held last month at White Sulphur Springs, W. Va.

The boards nominated C. P. Street, of McDewitt & Street Co., Charlotte, North Carolina, for president in 1953, and John MacLeod, Macco Corporation, Paramount, California, for vice president. The boards also named Miami, Fla., as the city of next year's convention.

In opening the three-day sessions President Arthur S. Horner, of the A. S. Horner Construction Co., Denver, Colorado, said that "it has been the adherence to the fundamentals of what is best for the industry and the public which has made the A.G.C. effective and has enhanced its prestige."

Speaking of industry problems, he stated:

"As private citizens we are not in a position to know—nor is it proper for us to know exactly—all of the plans for our national defense. Yet it is because of our national defense that many of the governmental restrictions on the construction industry are imposed.

"To many of us it appears that the public is no longer convinced of the urgency of the emergency which the President has proclaimed. Many of us believe that the government controls over the types of construction which can be undertaken without permission, the materials which are made available, the efforts to stabilize wages and the other regulations have reached the point—or soon will reach it—where they are not effective and where they only hamper the efficiency of the industry.

"We should give serious thought to what should be our recommendations on these government controls.

"The general contracting industry always has been one of the outstanding examples of free and open competition in this country. In many instances the competition has been so keen as to verge on the suicidal. Today we find some of the national associations of specialty contractors in the industry working for the establishment of business practices which would lead ultimately toward stifling competition in their phases of construction work. This needs our careful study.

"The total volume of construction activity has recently become the greatest single industry in the country, even exceeding the value of agricultural production. Therefore, what happens to and in this industry is of tremendous importance to the entire nation and to each citizen."

### Subcontractor Relationships

Extended discussion was given to relationships with subcontractors by the boards and in roundtable discussions by building, highway and heavy construction and railroad contractors. All discus-

sions emphasized that the best interests of the owner and the industry require that undivided responsibility for construction of projects be centralized in general contractors and anything which weakens that responsibility is contrary to those interests. The two boards also recognize the responsibility of general contractors for proper relationships with subcontractors.

Three actions were taken by the boards. These were:

1. Approved the report of a special committee, headed by E. J. Wheeler, of Frank Messer & Sons, Inc., Cincinnati, which had been appointed to study the subject of depositories for bids of subcontractors. The committee's conclusion:

"This committee has received the conclusion arrived at by the A.G.C. special committee appointed in 1948 to develop A Suggested Guide to Bidding Procedures in which they stood firm in their position that bid depositories are undesirable, and which position was approved by the A.G.C. Executive Committee. Our committee at this time concurs with the position taken by the above referred-to committee.

"It also recognizes the desirability of establishing better and closer relationships with the subcontractors and urges that all chapters, branches and members individually of the A.G.C. cooperate to this end, to correct any questionable practices so that harmony and confidence will be established in the industry."

2. Adopted a motion "that we stand strongly against the naming of subcontractors and separate contracts."

3. Adopted another motion that the Boards "hereby authorize the officers and Executive Committee to initiate such co-operative actions as they deem appropriate directed toward establishing more harmonious relationships between specialty and subcontractors and general contractors. The Boards further recommend that chapters and branches take such action in their areas."

### Mid-Year Report

In presenting his summary of association activities since conclusion of the 33rd annual convention last February, Managing Director H. E. Foreman reported the A.G.C. in its strongest position in membership, finances and prestige. Membership now exceeds 6,200. There are 121 chapters and branches throughout the United States and Alaska.

### Building Construction

Subjects discussed by the building contractors at their roundtable meeting included work of the national joint co-operative committees maintained with the American Institute of Architects and the Producers' Council; subcontractor relationships; revocation of construction credit restrictions of Regulation X; alternate design bidding for certain Air Corps facilities; Corps of Engineer specifications; government controls, and apprentice training activities.

Chairman W. Murray Werner, of the Werner Co., Shreveport, Louisiana, re-

(Continued on page 49)

## New Concrete Designs Popular at A.S.C.E. Meet

Prestressed concrete and thin-shell roof construction proved record-breaking drawing cards at the Centennial of Engineering of the American Society of Civil Engineers held in Chicago September 3-13.

Nearly 900 engineers visited the spacious grand ballroom of the Conrad Hilton Hotel to attend two joint sessions conducted by the structural division of the A.S.C.E. and the American Concrete Institute, held on the last two days of the anniversary meeting.

A major reason for the large attendance at the symposium on prestressed concrete was given in the opening report by M. J. Holley, associate professor of structural engineering at M.I.T., who pointed out that the use of prestressed concrete in this country has increased tenfold in the past year.

Professor Holley also noted that several large-scale projects were included in current construction and that there were now 34 plants set up to produce prestressed concrete on a production basis. Both facts are made more impressive by the realization that the first prestressed concrete bridge in the United States was completed only two years ago.

Backbone of the prestressed concrete session were papers on six noteworthy projects, presented by engineers largely responsible for their execution. Included were reports on:

- prestressed beams in New York Harbor Pier 57, by Capt. E. H. Fraeger of Madigan-Hyland, New York;
- prestressed girders in the Endicott Street Bridge, Danvers, Mass., by J. C. Rundlett, Bridge Engineer of the Boston Department of Public Works;
- prestressed beams in a large bridge at Caracas, Venezuela, by Robert Shama of the Freyssinet Co.;
- a vibration-controlled forging hammer foundation, by J. H. A. Crockett, London, England, and A. M. Klein, Assistant Manager of the Robert W. Hunt Co., New York;
- the Tampa Bay Bridge, by W. E. Dean, Engineer of Bridges of the Florida State Road Department;
- prestressed girders at Manhattanville College, by Curson Dobell, President of Preload Enterprises, Inc., New York.

Results of extensive bond tests on prestressed concrete, in part verifying the dependability of bond obtained from smooth surface wires of relatively small diameter, were presented in a paper by Jack R. Janney, Research and Development Division of the Portland Cement Association. It followed an earlier discussion of the value of continued research on prestressing by Dr. N. W. Newmark, Research Professor of Structural Engineering of the University of Illinois.

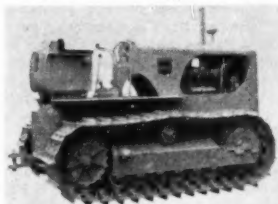
### Admiral Jelley Tells of Progress

"We have passed beyond the small projects . . . into the field of larger and more important utilization." Rear Ad-

(Continued on page 48)

# Equipment... Manufacturers News

## Improved Heavy Tractor Announced by Oliver



New Oliver "OC-18" Crawler Tractor.

The Oliver Corp., Chicago, Ill., has announced that its new "OC-18" crawler tractor is now available. According to the manufacturer, this new tractor has many new features which make it unusually easy to operate. Air steering is standard equipment on this tractor. An over-center clutch runs across the whole width of the dashboard so the operator can easily locate it without taking his eyes off the job. Other features include pushbutton electric starting with a cold weather starting aid as standard equipment, center positioned gear shift lever, parking brakes, throttle located at right arm rest, ample leg room and comfortable, two-man upholstered seat.

Oliver states that the tracks have been designed for maximum ground contact to give the tractor the greatest possible pulling power and more stability and balance for dozing. The OC-18 has 126 rated horsepower. It can be operated efficiently in mud, rocks or stumps because of its unusually high clearance.

Oliver also features a line of allied equipment for this heavy duty tractor.

## Huber Announces New 8-12, 10-14 Ton Tandem Rollers

Huber Manufacturing Co., of Marion, Ohio, has announced a new line of 8-12 and 10-14 ton tandem rollers. Designed for practical and efficient field service, the new units are described by the manufacturer as knocking the "scuff" out of tandem rolling jobs, especially because of its exclusive yoke feature.

For field servicing, all vital parts are readily accessible through adequate inspection plates and dust covers. Doors on either side of the engine can be taken off and locked on. The engine is also accessible from the rear, via a shield which encloses the rear of the frame in front of the guide roll. By loosening wing nut screws, the "fan end" of the engine is open for inspection. Roll scrapers are hand-adjustable, and all pressure grease fittings are within easy reach. The intermediate drive assembly is protected by an easily-removed housing.

One of the outstanding features of the new Huber tandem is the unit-welded frame. Side panels and crossmembers of the frame are cut from deep section, rolled steel, and welded into a deep box.

Additional lateral strength is provided by crossmembers of channel which also serve as the engine mountings. The 4½-inch drive roll axle adds another strengthening crossmember, since it is bolted rigidly in place between the two side panels of the frame. The kingpin housing is removable, and fits snugly into an especially welded compartment in the rear of the frame.

The final drive is machined into the frame in positive center alignment—mounted in rather than on the frame, to assure precision meshing of gears. Fully lubricated antifriction bearings are used in the intermediate drive pinion assembly and intermediate drive. The bull gear is protected by two sheet-metal guards.

Power is transmitted through a Twin-Disc fluid coupling, and a choice of gasoline or diesel engines is available.

The "scuff" or "rut" on finish courses, caused when the guide roll lags as the tandem stops to reverse direction, is said to be eliminated in the completely-adjustable Huber guide roll assembly. The manufacturer's exclusive yoke design makes it possible to adjust tapered roller



New Huber Tandem Operating on a Western Highway.

bearings at the kingpin, the yoke swivel pin and the roll axle. Any looseness which develops can be corrected immediately, thus eliminating guide roll yoke "wobble," one of the main causes of "scuff."

Guide rolls on the new Huber tandem have internal bracing to eliminate the side thrust on the heads from turning or curbing pressures. The two sections are machined in pairs to assure positive matching.

## Algoma Awards Koppers Coke Oven Contract

Algoma Steel Corp., Ltd., Sault Ste. Marie, Ontario, has awarded Koppers Company, Inc., a contract to design and build a new battery of 57 chemical-recovery coke ovens.

Joseph Becker, vice president and general manager of the Koppers engineering and construction division, said that the new battery will be of the Kopper-Becker design and that construction is expected to be completed in mid-1953.

The new ovens will each take a 17½-ton charge of coal and will operate on a 17-hour coking cycle.

Koppers also will construct additional by-product equipment and a coke handling and screening system for Algoma.

## Assistant Sales Manager Named by Atlantic

R. E. O'Neill has been appointed assistant general manager of sales of the Atlantic Steel Co., Atlanta, as announced by H. B. Johnson, company vice president.

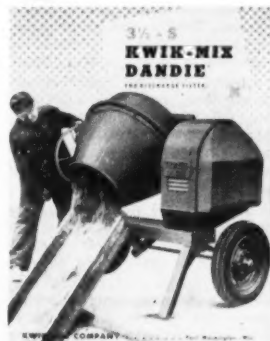
Mr. O'Neill has been with Atlantic Steel for 19 years, and has served in various operating and sales capacities. Prior to his acceptance of this post, he was manager of the rolled products sales division.

## Kwik-Mix Introduces 3½-S Concrete Mixer

Kwik-Mix Co. of Port Washington, Wisc., has introduced a new and improved model 3½-S tilting concrete mixer incorporating features that save time and work for operators. A subsidiary of the Koehring Company of Milwaukee, Kwik-Mix manufactures a complete line of concrete, bituminous and plaster mortar mixers as well as the Moto-Bug, the handy and versatile power wheelbarrow.

Powered by a standard make gasoline engine of 3.4 h.p. with smooth V-belt power transmission, this new half-bag end discharge Dandle mixer is equipped with improved mixing blades that provide faster mixing cycles. Operators can tilt the loaded drum easily for discharging because the tilting device works through a gear reduction arrangement for minimum effort. In addition, a simple friction brake will stop and hold the drum in any position. The Kwik-Mix push-down tow pole feature gives safe one-man spotting anywhere on the job or hitching to truck for trailing.

Construction features on the new 3½-S Dandle include 43" charging height and 18" drum opening for easy loading. The all-welded steel drum has a reinforced lip, a separate ring gear and box section yoke for long wearing durability. A sturdy undercarriage is provided by the husky steel axle; leaf spring mounting and standard size pneumatic tires absorb travel shocks and operating vibrations. Convenient storage hangers also are provided on the mixer to prevent loss or damage to the removable engine house cover and the 64-inch tow pole.





# Equipment... Manufacturers News

## Allis-Chalmers Acquires LaPlant-Choate Company



Allis-Chalmers enters scraper field by shipping first Model TS-300.

All property of the LaPlant-Choate Manufacturing Company, Cedar Rapids, Iowa, was officially acquired September 13 by Allis-Chalmers Manufacturing Co. of Milwaukee, Wisconsin, which started operating it Monday, September 15, as the Cedar Rapids Works of the Tractor Division.

A. D. Dennis, president of LaPlant-Choate is general manager according to an announcement by W. A. Roberts, Allis-Chalmers president. He reports directly to W. G. Schell, vice president in charge of the Tractor Division. Wallace Gates is works manager and H. W. Rockwell is chief engineer. Both of these men held the same positions in the LaPlant-Choate organization.

Cedar Rapids Works products will be sold and serviced through Allis-Chalmers dealers.

The rubber-tired motor scraper equipment rounds out the Allis-Chalmers industrial line. This includes crawler tractors and motor graders built at the Springfield, Illinois, Works and industrial wheel tractor and power units made at the West Allis, Wisconsin Works.

The transfer of LaPlant-Choate to Allis-Chalmers was on the basis of one share of Allis-Chalmers common stock for five shares of LaPlant-Choate common.

The Cedar Rapids Works, employing approximately 900 people, becomes the eleventh Allis-Chalmers plant in the United States. The company also has two plants in Canada and two in England.

LaPlant-Choate adds its 41 years of engineering know-how in the earth-moving equipment field to the 104-year-old history of Allis-Chalmers. Founded as a partnership in 1911 by E. W. LaPlant and Roy Choate, the Cedar Rapids company's first products were horse-drawn stump pullers and house-moving equipment. Development of heavy trailers, steel dump wagons, bulldozers, and other tractor-powered equipment followed through the years.

In 1945 a Diesel-powered, high-speed, rubber-tired tractor scraper combination was tested. The first unit of this type was shipped in 1947. Today, the line includes the TS-200 motor scraper with a capacity of 10 cubic yards struck and 13 heaped; the TR-200 rear-dump motor wagon with capacities of 18 tons or 11

and 15 cubic yards struck and heaped; the TS-300 motor scraper of 14 and 18 cubic yards struck and heaped; and the TW-300 bottom-dump motor wagon of 22 tons capacity or 14 and 19 cubic yards struck and heaped.

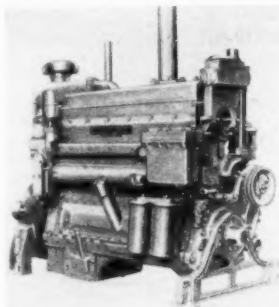
## High Speed Diesel in Production by Caterpillar

A new high-speed diesel engine is in production by Caterpillar Tractor Co. Designated the Cat D326, this engine is offered in industrial, electric set and marine arrangements, as follows:

1. D326 Industrial Engine — intermittent output rating of 170 horsepower at 2,000 rpm; weight, approximately 3,650 lbs.
2. D326 Electric Set — 12-hour rated output of 80 KW; set available as a 50-cycle unit, with a 60-cycle unit anticipated at a future date.
3. D326 Marine Engine — on 24-hour, continuous duty, produces 118 horsepower at 1,600 rpm.

The basic D326 Engine is six-cylinder and has a 5½-inch bore and 6-inch stroke. Its announcement follows last year's introduction of the Cat D337, similar in many ways but built for a higher horsepower output.

With the engines came new developments in the Caterpillar fuel injection system of individual pumps and valves.



D326 Caterpillar Diesel Engine for Industrial, Marine, Electric use.

The pumps are mounted directly adjacent to the cylinders they serve, and the fuel lines made short and identical. These pumps, as well as the intake and exhaust valves, are actuated by a single camshaft.

Both engines include special heat resisting metal inserts in the tops of pistons and the valve seats. Main and connecting rod bearings are precision-type, of steel-backed aluminum with high fatigue resistance. Piston cooling is by means of oil jets from under-mounted nozzles.

Complete information is available from the local caterpillar dealer or Caterpillar Tractor Co., Peoria 8, Ill.

## Littleford Names Pavlov

Littleford Brothers, Inc., Cincinnati, Ohio manufacturer of road maintenance and construction equipment, has appointed Pavlov Equipment Co. to a dealership for the Philadelphia and surrounding territory, where the dealer will handle the complete and extensive Littleford line, the Kwik-Steam generator and also roofing equipment.

M. C. Pavlov, who heads the business, was associated many years with one of the leading equipment dealers in Philadelphia. He has been selling to the contractor and industrial field for over twenty-five years. Affectionately called "Pavy," he is well known in the Philadelphia area.

Pavlov headquarters have been opened at 847 E. Chelton Avenue, Philadelphia. The telephone number is Victor 4-8300. A representative stock will be carried in applying the "right equipment for the job," according to Mr. Pavlov. Parts and service will also be available.

## Farr Appointed Treasurer of Steel, Wire Division

Walter V. Farr has been appointed treasurer of American Steel and Wire, it is announced by Harvey B. Jordan, president of the U. S. Steel division.

Mr. Farr, who has been assistant treasurer of the wire division in the Chicago district, will move to Cleveland to succeed John J. Farrell, who has been promoted to assistant treasurer of United States Steel Company in Pittsburgh, Pa.

In February 1934 Mr. Farr first became associated with the wire division as a property appraisal clerk. With the exception of two years from 1935 to 1937, when he served with a private accounting firm, Mr. Farr advanced through the ranks of the wire division, becoming audit supervisor in 1938.

He became credit manager of the Chicago office in June 1942, and was promoted to assistant treasurer in July 1945.

Mr. Farr was born in Sharon, Pa., on August 24, 1906. He was graduated from the University of Pittsburgh in 1929 with a degree in business administration and was associated with two accounting firms before joining American Steel and Wire.

## Weather Guide Issued By Galion Iron Works

A handy pocket-size "Guide to the Weather" is free to all who write to Galion Iron Works & Manufacturing Co., Galion, Ohio, or any of their distributors. Most of us cannot do much about changing the weather, but with the help of this little booklet we can at least prepare for it. The Galion weather guide contains sixteen four-color photos of different types of skies, with simple explanations of the weather they foretell. It is claimed that with the aid of this booklet, you will be able to forecast the weather with remarkable accuracy.



*in your Sunday best...and in concrete construction*



## *... details make the difference!*

Shoes that sparkle . . . the right necktie . . . maybe even a flower in your lapel! Yes, it's the little things that make you look like a million when you dress up in your Sunday suit. And all through the rest of the week, when you work with air entraining concrete, remember—here too, *it's the details that make the difference!*

Construction men know that differences in the type and gradation of the aggregate they use and even the temperature of the mix will result in differences in the amount of air entrained in concrete. It's also important to remember that even such a "small" detail as the condition of your mixer blades can cause marked variations in the air entraining capacity of your concrete. *Worn blades cause entrainment of less air than new blades.* Because all air entraining cement is a standardized product—manufactured to rigid Federal and ASTM specifications—provision for these important "little" details must come from you!

That's why, on jobs that call for air entraining concrete, you'll find it wise to add the *required* amount of any well known air entraining agent to regular portland cement at the mixer. Then you'll be *sure* of air entrained concrete that looks—and performs—"like a million"! Just remember, use air entraining cement only when you're sure . . . remember too—air entraining or regular portland, there's no better cement than Hermitage.

★ ★ ★

*If you have any problems or questions on the use and mixing of air-entrained concrete, the Hermitage Service Engineer will be glad to help and advise you—contact the Hermitage office.*



### **Hermitage Portland Cement Company**

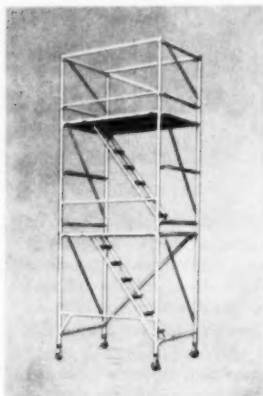
American Trust Building, Nashville 3, Tenn.

*Portland • High Early Strength • Air Entraining • Masonry*

# Equipment . . .

## Folding Aluminum Scaffold By Patent Scaffolding

An innovation in aluminum scaffolding has been announced by the Patent Scaffolding Co., Inc., of Long Island City, N. Y. The new product known as "Fold-a-way" scaffold, is a folding aluminum



**Fold-A-Way Aluminum Scaffolding  
made by Patent Scaffolding Co.**

rolling scaffold designed for easy erection and carrying. It is offered in addition to the manufacturer's line of Aluminum Sectional Rolling Scaffolds.

"Fold-a-way" scaffold is made up of tubular frames, with end frames hinged in such a way that the scaffold opens sideways with no member swinging more than 90 degrees. This permits one man to erect or dismantle the base section while standing within the base area, and prevents danger of collapse or "fold under" during erection. One man, unassisted, can erect the base section in less than a minute. Base, intermediate and top sections are all preassembled, have no loose parts, and unfold as described.

"Fold-a-way" scaffold includes an internal stairway for ascension and adjustable "Loki-Ring" legs on the base section for use on uneven footing. For moving the scaffold after erection, the legs are fitted with casters, which have a simple lever control for locking both wheel and swivel securely. Coped joints are fully welded for maximum strength, and adequate bracing is used to insure rigidity.

These lightweight scaffolds are available in base sections, full and half intermediate sections and guard-rail top sections, permitting them to be built up to required heights. Where desired, "Fold-a-way" base sections may be fitted with intermediate or top sections of standard Aluminum Rolling Scaffolds without adaptation or adjustment.

The God who gave us life, gave us liberty at the same time.

—Jefferson

## Market Research Head Named by Oliver

The Oliver Corp., Chicago farm and industrial equipment manufacturer, has announced the establishment of an important new activity within the company and a number of resulting promotions for personnel at several locations.

E. H. Fisher, general manager of the recently acquired A. B. Farquhar Division in York, Pa., has been advanced to the position of director of marketing. This office has been set up by Homer F. Donagher, vice president and general manager, to assume general supervision over all activities falling within market research, advertising, sales promotion, sales training, product specification and related fields.

Mr. Fisher, a lifelong resident of York, has completed arrangements to transfer to Chicago immediately and has already announced two appointments. S. W. White, Jr., a member of the general sales department in Chicago, has been placed in charge of market research, and J. O. Cunningham, formerly merchandising department manager, has been assigned the responsibility of advertising manager.

At the same time, C. L. Hecker, first vice president, announced that Frank J. Zielsdorf, manager of Oliver's Springfield, Ohio plant, has been promoted to general manager of the company's operations in York, where he succeeds Mr. Fisher.

C. W. Thornell, superintendent of Oliver's large light line implement plant in South Bend, Indiana, succeeds Mr. Zielsdorf at Springfield where he has in the past been both methods and general superintendent.

## International Harvester Dedicates \$8,000,000 Truck Engineering Building

International Harvester Co. late last month formally dedicated its new \$8,000,000 motor truck engineering building and laboratories in Fort Wayne, Ind., with President John L. McCaffrey, making the principal address at a luncheon for approximately 300 Fort Wayne civic and business leaders, representatives of engineering schools and the press. Guests subsequently toured the new facilities.

Built for the company's motor truck division, the new operation is situated on 25 acres of ground on Meyer Road just off U. S. Highway 30. The engineering department and laboratories are adjacent to the company's Fort Wayne Works, one of four motor truck manufacturing operations in the Harvester motor truck division.

About 633 engineers, technical and professional people, office and clerical people, are presently employed to carry on the work at its current scale of operation. W. D. Reese, manager of engineering for the motor truck division, and P. T. Brantingham, assistant manager of en-

(Continued on page 46)

See Your  
**FOOTE**  
Sales Agent

—for  
**MultiFoote and  
Adnun Pavers**

**MATT A. DOETSCH  
MACHINERY CO.**  
Washington, D. C.

**GILL EQUIPMENT CO.**  
Atlanta, Ga.

**INTERSTATE  
EQUIPMENT CO.**  
Statesville, N. C.

**G. C. PHILLIPS  
TRACTOR COMPANY**  
Birmingham, Ala.

**SOUTHERN  
EQUIPMENT SALES  
COMPANY**  
Columbia, S. C.

**WEST VA. TRACTOR  
& EQUIPMENT**  
Charleston, W. Va.

—for  
**Adnun Black  
Top Pavers**

**MARTIN  
MACHINERY &  
SUPPLY COMPANY**  
Knoxville &  
Chattanooga, Tenn.

# Three stories up!

SLANT your eye up that boom! That will put your concrete up three stories. Note the bucket. Spout feed—as much or as little as you need at a time. Pour right to the forms or feed it to a hopper or concrete buggies. No ramps, no chuting towers, no elevators, no crane—save money, pour direct and have absolute control of your mix.

The MultiFoote is a multi-purpose machine. It reduces the concrete buggy crew on the job. Crawler traction negotiates ground that bog wheels and when using the shorter standard Highlift boom the MultiFoote will work in headroom too low for crane clearances. Finally the MultiFoote is quickly converted to a standard paver which both increases the range of jobs and the value of resale over wheeled equipment.



Don't buy a one purpose unit.  
Ask for more details.

**THE FOOTE COMPANY, INC.**

Subsidiary of Blaw-Knox Co.  
Nunda • New York

## MULTIFOOTE PAVER

**FOR EVERY PLACE CONCRETE MUST BE POURED**



# Equipment . . . Manufacturers News

## International Harvester Company Dedicates New \$8,000,000 Engineering Building, Laboratories

(Continued from page 4)

gineering, are the administrative heads of the new operation.

The building was completed in 1952, and for the first time in the company's history the Harvester motor truck product engineering and advanced engineering groups are under one roof and working in an environment most conducive to the design, test and development of motor truck transportation.

The E-shaped, three-wing, one-story brick building was built with more than a million masonry units. More than 1,700 tons of gypsum, pitch and slag together with 2,700 rolls of felt went into the roof. More than 2,600 tons of structural steel, reinforcing steel rod and mesh wire, and miscellaneous iron went into the structure.

A half-million cubic yards of fill were used to bring the site to its present grade. More than 15,000 cubic yards of concrete went into the building, the roads, and other places.

The engineering building at its widest point is 518 feet across the front. The south wing is 716 feet long. The north and center wings are somewhat shorter.

Ground floor space adds up to 232,000 square feet. Suspended slabs, forming mezzanines, mostly for fan installations, add 56,000 more square feet. Basement areas total 14,000 square feet and make the total square footage equal to 302,000.

The administration offices lie across the front of the building. The three wings are devoted, in the main, to: design in the north wing, shop and road test in the center wing, and engineering and test laboratories in the south wing.

In the design and construction of the building particular attention was paid to working conditions for all engineering personnel. Spacious, comfortable, clean and easily-maintained working room has been provided for every functional group and unit.

Approximately 4,000 fluorescent fixtures and 724 incandescent fixtures make this operation the best-lighted of all Harvester operations and equal to any in the world. The total lighting load in the

building is 620.5 KW. This is in addition, of course, to natural light from an unusual amount of window lights of special glass which filters out part of the sun's heat.

The building is air-conditioned except in shop and test areas, which have adequate forced air ventilation. Where the nature of the work, or the instrumentation requires it, there is temperature and humidity control as in the electronics laboratory, instrument room, and air flow laboratory.

The supply, recirculation, and exhaust of air in the building is maintained by 139 fans with a capacity for handling two and a quarter million cubic feet of air a minute. Air change ranges from once every 30 seconds in test cells, to once every six minutes in the drafting room. All circulated air is filtered through oil type cleaners. Test cells are individually ventilated.

The laboratories and offices have the very latest acoustic treatment to reduce noise.

A completely-equipped medical dispensary in charge of a nurse is maintained for use by employees requiring medical attention while on the job.

A well-appointed, modern, air-conditioned cafeteria supplies a variety of healthful meals at nominal cost for all engineering employees.

Water for engineering operations is supplied from a spherical tank 35 feet in diameter and elevated 100 feet. The sphere houses two compartments: a 50,000 gallon compartment for domestic service; a 100,000 gallon compartment for fire. Thirty-six thousand gallons of process water circulate every hour for cooling dynamometers and test engines.

A "tank farm" of eight tanks holding 44,000 gallons supplies fuel to test cells. Two 15,000-gallon tanks provide standard gasoline with which most trucks are tested; two 5,000-gallon tanks supply premium gasoline; four 1,000-gallon tanks supply special fuels. Some test cells, both endurance and development, have systems to accommodate Diesel and LPG (liquid petroleum gas) fuels.

International Harvester Co. last month opened its new engineering building and laboratories at Fort Wayne.



## Color Bulletin Issued On the Tournarocker



A 28-page booklet in color, describing and picturing the LeTourneau Tournarocker, a modern rear-dump designed as a unit for off-road and highway hauling of dirt, rock and ore, has just been issued by R. G. LeTourneau, Inc., of Peoria, Ill.

Action shots and cut-out photos of integral parts of the machine illustrate how and why it hauls anywhere, cuts weather delays, reduces maintenance, speeds loading and saves spotting time.

Its fingertip electric control system, 90° turning ability, instant shift transmission and torque converter, and big tire features are colorfully illustrated in numerous photographs diagrams.

Those interested in this tool, which is built in 9-, 18- and 35- or 50-ton custom-built capacities, may obtain this booklet by requesting Bulletin TK-137 from the LeTourneau advertising department.

## Allis-Chalmers Announces Weather-Protected Motor

A new outdoor weather-protected motor which carries protection much further than the splashproof design has been announced by Allis-Chalmers Manufacturing Co., of Milwaukee, Wisc., for use in semi-outdoor and outdoor steam electric stations.

The new motor is designed to keep wind-driven heavy moisture out of its windings. Its intake velocity has been reduced to less than 600 feet per minute, so heavy rain particles cannot be drawn into the motor. Air moves vertically upward through side intakes into a greatly expanded air space, further lowering its velocity.

## Shipley, Louisville, Named Wayne Division Distributor

Shipley, Inc., of Louisville, Ky., has been appointed distributor for the Wayne Division products of Gar Wood Industries, Inc., according to an announcement by W. S. Blakeslee, Wayne Division sales manager.

Territory assigned to the new distributor will include the Kentucky counties

of Adair, Allen, Anderson, Barren, Boyle, Breckinridge, Bullitt, Butler, Casey, Cumberland, Edmonson, Fayette, Franklin, Garrard, Grayson, Green, Hardon, Hart, Henry, Jefferson, Jassamine, Laurel, Lincoln, Logan, Meade, Marion, Mercer, Metcalfe, Monroe, Nelson, Oldham, Shelby, Simpson, Spencer, Taylor, Trimble, Warren, Washington, Woodford, and the Indiana Counties of Clark, Crawford, Floyd, Harrison, Orange, Perry, Scott, Washington.

Gar Wood Wayne division products include a complete line of truck hoists and bodies, winches, cranes, pole derricks, Load-Packer refuse collection units and elevating end-gates.

### Paving Supply Company Promotes McCrossin

C. Douglas McCrossin has been elected vice-president in charge of sales of Paving Supply and Equipment Co., of Washington and Baltimore, it was announced by president Harris H. Thomson. H. E. Erskine Fraser was re-elected as secretary-treasurer of the firm, a post he has held since 1942.

Mr. McCrossin has been in the construction business in the D. C., Maryland and Virginia area for the past 22 years and for the past ten years has been service manager of Paving Supply Company. His promotion is part of the continuing expansion program of this organization.

The Paving Supply and Equipment Co. has developed its diesel and ignition division to repair and service all types of diesel injection equipment and electrical systems on construction, marine and industrial machinery. Recently, the firm acquired the Tool & Supply Co., of Baltimore, from the Ramset Company of Cleveland in order to handle the line of small equipment and to expand the Paving Supply small tool division.

During the last 17 years, Paving Supply & Equipment Co. has expanded to become one of the major construction machinery houses in the District of Columbia, Maryland, Delaware and Virginia area. The firm maintains major offices in both Washington and Baltimore and specializes in the sale of all types of construction equipment used by builders, contractors, road construction and industrial firms.

### Catton Promotion Made By Cement Association

Miles D. Catton, Director of Development of the Portland Cement Association since 1949, has been appointed assistant to A. Allan Bates, vice president for research and development, succeeding H. F. Gonnerman, who retired after thirty years of active service with the Association.

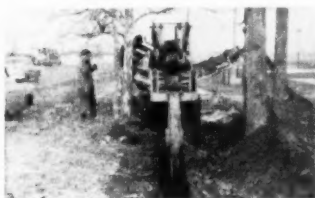
Mr. Catton is best known as the author of numerous scientific papers and technical brochures on soil-cement construction and for his pioneering work in this field. Between 1935 and 1940, laboratory and field studies directed by him on the feasibility of scientific control of mixtures of native soil and portland cement were in large measure responsible for the development of this paving material.



## CLEVELANDS are Profit Producers

**They have a 30-year record of delivering more trench...in more places...at less cost**

You can depend on CLEVELANDS for steady production because they're built tough. They're compact and maneuverable, with a wide range of trench sizes and digging speeds. You profit more because you do more at less cost with CLEVELANDS!



Tough frost and tight quarters were profitably overcome by this CLEVELAND.

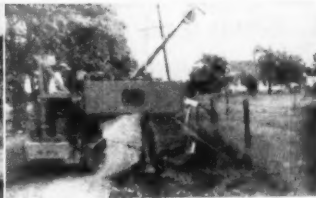


100% machine digging on this house service with a compact, maneuverable CLEVELAND.

### THE CLEVELAND 80 WITH JUST 1 MAN DOES 3 BIG TRENCH-COMPLETION JOBS



...lays pipe...



...fills trench...tamps fill...

The CLEVELAND 80 saves you time, work and money on all your trench completion jobs. It fills, tamps and travels simultaneously, handles pipe, does all types of side crane work. Backfills from either side of trench, tamps from side or straddling trench—fast, clean, smooth.



...and does a thorough clean-up job.

Get the full CLEVELAND Story from Your Local Distributor



Pioneer of the Modern Trencher  
**THE CLEVELAND TRENCHER CO.**  
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## New Concrete Designs Popular at A.S.C.E. Meet

(Continued from page 40)

miral J. F. Jelley told the large group at the end of the prestressed concrete session. The Chief of the Bureau of Yards and Docks pointed to the Tampa Bay Bridge and New York Pier 57 as examples of such projects in this country, and said that he was impressed with the indication that "prestressed concrete is becoming competitive with the older materials and methods of construction."

"Of particular interest to me," he added, "is the fact that savings in steel, particularly structural steel, can be expected from the use of prestressed concrete. The savings of structural shapes have been particularly important during the past two years when the construction industry has been operating under a system of priorities and allocations."

The Bureau of Yards and Docks, he noted, has its largest building construction program in times of emergency when critical material shortages must be anticipated, and he predicted that prestressed concrete will play an important role at such times.

### Designers "Too Conservative"

Admiral Jelley said the need for a long-range coordinated program of research such as that advocated by Professor Newmark and undertaken by the Portland Cement Association, the University of Illinois and other agencies. But he made it clear that he believes past and current research "indicates that

designers have been too conservative up to now."

"I have noticed," he said, "that most designers are conservative. They prefer to learn to walk before they begin to run. I'm sure our designers are now learning to walk firmly as far as prestressing is concerned."

He stated that he was greatly encouraged that three of the speakers (Professor Holley, Dr. Newmark and Mr. Dobell) recognized that we must look forward to advances in design "and not restrict the use of prestressing to simple beams."

### Thin Shell Session

Engineers attending the final day joint session were treated to spectacular illustrated discussions of past, current and proposed thin shell concrete roof construction here and abroad.

So unusual were some of the projects described by Louis Corbetta of Corbetta Construction Co., who read the paper of Pier Luigi Nervi, Nervi and Bartoli, Rome, Italy, that the crowd broke into exclamations of amazement.

Shown were photographs of the 320-foot span Torino Exposition Hall; Dr. Nervi's "birdcage like" hangar, built in the early '40's on the shores of the Mediterranean; and the salon of the Bathing House of Chianciano, built in 1951. This latter building showed imaginative use of precast, curved, undulated slabs with a span length of about 41 feet.

Mr. Corbetta stated that Dr. Nervi,

after studying the procedure of architects Loretto & Marchi in designing a large hangar for the Buenos Aires Airport with a span of about 590 feet, felt the possibilities were almost limitless.

"I tried to examine the limitations for this undulated structure," Dr. Nervi wrote, "and I came to the conclusion that it is possible without great cost to build an arch with a span of 300 metres (about 984 feet) long enough to cover St. Peter's Square in Rome, including the Portico of Berini."

Highpoints of the session, however, were provided by Corbetta's own comments on the lag in such construction in this country.

"When the advantages of new design in construction thinking are self-evident," he said, "let the architect-engineer come forward boldly with his design as a base bid, never mind the alternates. I feel that the contractors of America will respond to the challenge and in no time the new techniques will be learned, and then competition will take care of the rest."

Admiral Jelley, in his preceding day's speech, had said that he was disturbed by a condition where alternate bids were left unexplored. "We have frequently asked for bids on alternate methods of construction," Admiral Jelley commented, "Almost invariably the contractor will concentrate his efforts on the older methods and will put high prices on new methods of construction. I have come to the conclusion that the only way we can get contractors to bid on new methods . . . is to include no alternate bids permitting other methods."

Charles Whitney, Ammann & Whitney, New York and Milwaukee, and Anton Tedesco of Roberts and Schaefer, Chicago, presented papers on thin shell design and included in their slides several outstanding American structures.

Some of these, such as the terminal building proposed by Hellmuth, Yamasaki & Leinweber, architects, for the St. Louis Municipal Airport, and the auditorium being designed by Eero Saarinen and Associates for Massachusetts Institute of Technology, employ designs not common to the American scene, and give indication that thin shell development in the United States is becoming more imaginative.

A report on analysis and tests of a cylindrical shell roof model by Bruno Thurlimann of Lehigh University and Bruce C. Johnson, Professor of Structural Engineering at the University of Michigan, rounded out the thin shell discussion.

A paper on the precast concrete foundations in New York Harbor Pier 57, by Captain Praeger; a report on precast concrete in highway bridge construction by E. L. Erickson, Chief of the Bridge Branch of the Bureau of Public Roads; and an illustrated summary of tests of fire resistance of reinforced concrete floors by J. P. Thompson of the Portland Cement Association, were also presented at the last day joint session.

## Griffith Made Commissioner of West Virginia Roads



H. K. Griffith

the Twenty-seventh Seabee Battalion for three years. At the war's conclusion he assumed his duties with the West Virginia Commission as maintenance assistant to the district engineer, District Four, Clarksburg. He was appointed senior maintenance engineer in May 1948 and was made District Four engineer January 1949.

Commissioner Griffith was appointed state maintenance engineer upon the death of C. L. Hundley in June, 1950, which position he held until July 1 this year when he was elevated to the post of administrative assistant when Mr. Radcliffe became commissioner succeeding Ray Cavendish.

Prior to becoming affiliated with the West Virginia Commission, Mr. Griffith served as project engineer for the Works Projects Administration in West Virginia.

Before coming to Charleston as state maintenance engineer he resided in Kingwood where his family now reside.

Commissioner Griffith is a registered professional engineer and a member of state and national engineering societies and the American Road Builders Association. He is a member of the Presbyterian Church, the American Legion, Veterans of Foreign Wars and the Charleston Press Club.

H. K. Griffith has been appointed state road commission by Gov. Patterson, succeeding the late Harry Radcliffe. The new commissioner has been affiliated with the West Virginia commission in an engineering capacity since 1942. He is a native of Hambleton, Tucker County, West Virginia.

During World War II Commissioner Griffith served as chief petty officer with

## A.G.C. Boards Meet

(Continued from page 40)

ported that the meeting recommended that certain Corps of Engineer specifications be improved so that bidders have more definite and complete information on what is required.

The meeting also recommended that steps be taken to bring about greater familiarity by architects of the booklet, A Suggested Guide to Bidding Procedure, developed and published jointly by the A.I.A. and A.G.C.

### Highway Contractors

A wide variety of highway and airport construction problems were discussed by highway contractors at their roundtable meeting, Chairman Fred W. Heldenfels, Jr., Heldenfels Bros., Corpus Christi, Texas, reported.

The meeting emphasized the need for more rapid utilization of federal aid highway funds by the states. The advertisements by various manufacturers pointing out to the public the needs for highway construction were commended. It praised the "Project-Adequate Roads" program and current "grass roots" meetings on highway needs such as those sponsored by the Texas Good Roads Federation and others.

Study disclosed that many concrete efforts are being made in all parts of the country to encourage engineering students in the field of highway construction engineering by scholarships, awards and aid plans. The group recommended that individual contractors and chapters continue to do everything possible to increase the salary scales of highway engineers, and urged that highway departments use engineering manpower with the "utmost economy compatible with efficiency."

A special committee headed by N. K. Dickerson, Jr., Dickerson, Inc., Monroe, North Carolina, was appointed to confer with appropriate A.G.C. committees and the staff in an effort to bring about the adoption of more equitable specifications for compaction and asphaltic concrete in airfield construction.

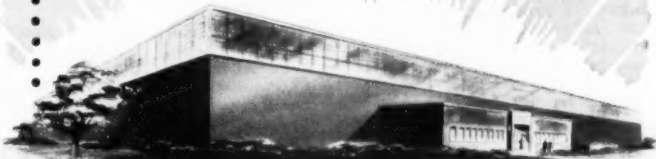
### Heavy and Railroad Construction

The roundtable meeting of heavy construction and railroad contractors directed that continued efforts be made toward securing more equitable provisions in the Defense Department's alternate design program and in equipment rental rates. Chairman E. P. Coblenz, McLean Contracting Co., Baltimore, reported.

Formation of a national joint cooperative committee with the American Public Works Association was recommended following a report by F. S. Oldt, F. S. Oldt Co., Dallas, Texas, chairman of the Task Unit for Municipal Specifications. George C. Looz, Stolte, Inc., Oakland, California, and Mr. Coblenz, chairmen of task units on Bureau of Reclamation and Bureau of Yards and Docks specifications cited beneficial results from close cooperation with these agencies.

# GRAND OPENING

OCTOBER 31 - NOVEMBER 1



*You're invited...*

## to Atlantic Steel Company's Warehouse Division Open House and Trade Show

THERE'LL BE BIG DOINGS in Atlanta come October 31 and November 1.

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In celebration of this big event, we are holding a two day *Open House and Trade Show* for our customers, suppliers and other friends.

You'll see exhibits of the latest uses of stainless steels for the dairy, textile, pulp and paper industries and hospitals—as well as chemical, automotive and food industries. And there'll be exhibits of the products our warehouse customers make of expanded metals, cold drawn steel, and copper, as well as carbon steels.

There'll be a playground and movies for the kids and refreshments for all.

We want you to come and see for yourself how our new warehouse and facilities will enable us to serve our increasing number of customers better than ever.

**Service In Step With Southern Progress**

WAREHOUSE DIVISION

**Atlantic Steel Company**

ATLANTA, GEORGIA • EMERSON 3451

# Florida Turnpike Outlined in Report

(Continued from page 39)

lines. These include U. S. 1 from Jacksonville to Miami; U. S. 92 from Tampa to Kissimmee, U. S. 17 from Jacksonville to Winter Haven, U. S. 441 from Orlando to Miami, and parts of State Road A1A.

Daily average usage of the proposed turnpike is estimated at 2,563,977 vehicles-miles. The estimated average daily traffic volume would be 5,788 vehicles. Approximately 2,540 of these, or one-third of the total daily traffic would make a full trip over the route, either between Jacksonville and Miami or from Jacksonville to the Tampa-St. Petersburg area.

Estimated gross revenue for the proposed Florida toll highway system is \$16,685,024, basing the proposed rate at the preliminary figure of one and one-quarter cents per mile for passenger cars and light trucks and from two to seven cents per mile for medium trucks, heavy trucks and buses, depending on their size and weight. The first year figure could be expected to gradually rise to \$32,818,439, with an annual average over the initial decade of \$25,708,884.

The high-speed road, according to the preliminary proposal, will reflect the ultimate in highway facilities. There will be two lanes in each direction. The opposing lanes of traffic will be separated by a center mall. Shoulders on either side will be stabilized to accommodate disabled vehicles.

A maximum of three per cent is proposed for both ascending and descending grades. Maximum sight distances, as well as ease of travel at design speeds will be assured by long tangent roadway stretches and curves, both of the horizontal and vertical variety. These will be of sufficient radius to meet the design criteria.

Service stations and restaurants are proposed for the Florida route, following the general plan on similar highways. All highways and railroads intersecting the route would be carried on structures either over or under the turnpike roadway. Where traffic volume on adjoining roads would not justify the expense of a grade separation structure, service roads would be built to reroute traffic to adjacent highways.

Interchanges on the north-south main turnpike would be located near: Bayard, St. Augustine, Bunnell, Daytona Beach and New Smyrna Beach. Southeast of the New Smyrna Beach interchange the Cross-State turnpike will diverge from the coastal route. South of this point, the next interchange is proposed near Titusville.

Turnpike interchanges are also proposed near Cocoa, Melbourne and Vero Beach; southwest of Stuart; and near West Palm Beach. Farther down the interchanges would be located near Delray Beach, Pompano Beach and Fort Lauderdale. The southern terminal would be northwest of Miami, under the present proposal.

Proceeding southwesterly along the Cross-State leg of the turnpike system,

the first interchange is proposed east of Orlando. Others would be near Kissimmee, north of Haines City on U. S. 27, near Lakeland, and near Plant City.

As the proposed toll highway approaches the west coast, the interchange locations are at the intersections of U. S. routes 301 and 41, north of Tampa. The western terminal would connect with U. S. 19, near Clearwater, north of St. Petersburg.

Cost of the proposed Florida Turnpike System is estimated at \$242,500,000. Of this \$146,983,000 would be for the East Coast route and \$51,865,000 for the cross-state route.

The construction estimate is broken down as follows:

Preliminary Expense .....	\$500,000
Right-of-Way .....	4,700,000
Construction Cost .....	198,848,000
Engineering .....	15,908,000
Legal, Administrative .....	500,000
Organizational Expense .....	2,000,000
Contingencies .....	18,044,000

Maintenance and operation cost for the 443 miles of the turnpike system is estimated at approximately \$10,000 a mile annually, or a total of \$4,500,000.

Design criteria, as proposed by the New York engineering firm, include the following:

Speed, 70 miles an hour;

Sight distances on horizontal and vertical curves based on 4½-foot height of driver's eye to four-inch height of object shall be a minimum of 600 feet;

Vertical curves, of sufficient length to provide satisfactory sight distances and good riding;

Horizontal curvature, maximum of three degrees;

Superelevation, at rate of one inch per foot of width;

Horizontal curves about 19 minutes to be superelevated;

Rate of grade, maximum of three per cent on turnpike;

Rate of grade on ramp connections, maximum of five per cent for up-grade ramps; six per cent for down-grade ramps;

Grade elevation of turnpike roadways, such that top of subgrade is minimum of two feet above flood stage;

Center mall to be increased as much as practical and where possible varied to relieve monotony and effect economies in costs;

The roadway section is to consist of two 24-foot wide high-type pavements, separated by a mall, the minimum width to be four feet;

Pavement with straight slope from inside edge to outside edge of three-sixteenths of an inch per foot at all locations except at super-elevated sections;

Shoulders shall be eight feet minimum in width and stabilized;

Side slopes in both cut and fill sections shall be 1 on 6 up to six feet in height; 1 on 4 for heights between 6 and 10 feet; 1 on 2 with guard rail for heights above 10 feet;

Ditch of adequate width and depth will

be constructed adjacent to outside slopes of all cut sections;

Where center mall exceeds 26 feet it shall be depressed on slope not steeper than 1 on 4 to provide center drainage; for widths less than 26 feet, drainage may be across pavement;

Mulch, muck blanket or other suitable material shall be used on shoulders and on unstabilized portions of roadway, slopes and ditches;

Selective clearing and grubbing shall be carried out at all parts of right-of-way beyond the top of back slopes, beyond bottom of fill slopes and in mall wherever possible outside limits of shoulders;

Right-of-way shall be minimum of 200 feet;

Borrow shall be obtained from areas at least 300 feet from roadway right-of-way;

Curbs shall be provided only in sections with a narrow center mall; immediately adjacent to structures and as barriers at piers;

The 12-inch depth of subgrade direction below pavement and stabilized portions of shoulders shall have minimum bearing value of 75 pounds per square inch; shoulder stabilization to be six inches deep;

All existing open ditches shall be spanned with drainage structures; suitable transverse and longitudinal drainage shall be provided for the turnpike and interchange areas;

Long viaduct structures over 140 feet shall be pile trestle type. The cross section shall be two 28-foot wide roadways separated by six-inch high, four-foot minimum wide raised center mall. Outside curbs shall be 10 inches high; Safety walks two feet wide shall be provided between the outside curbs and railings.

Short viaducts and structures, less than 140 feet, shall be of design satisfactory for conditions. Cross section shall be 28-foot wide roadway between 10-inch curbs. Safety walks shall be two feet wide. Appropriate horizontal and vertical clearances shall be allowed for crossing existing railroads, highways and interchange ramps. Approach slabs of reinforced concrete shall be provided adjacent to structure decks. Architectural treatment shall be pleasing.

On the subject on the interchanges, the proposal reads: Two 1-foot roadways plus two-foot shoulders shall be carried across the interchange structures. A four-foot divisor strip and two two-foot safety curbs shall be used. Below the structure, the turnpike center mall shall be constructed on a long transition to a minimum width of 14 feet between the inside edges of the roadways, allowing for the two-foot inside shoulders plus five feet to the center line of the center pier. Adjacent to the outside edge of one of the 24-foot roadways shall be a 12-foot acceleration lane carried under the bridge. Between the outside edge of this acceleration lane and the face of the bridge, an eight-foot minimum clearance shall be provided. The same minimum clearance shall be provided between the standard 24-foot roadway and the bridge pier on the opposite side.

## Wiedl Joins Atlantic

Michael F. Wiedl, Jr. has joined the advertising department of Atlantic Steel Company, it is announced by Vice President Howard B. Johnson.

Mr. Wiedl is widely known throughout the South in the metal-working field. He has been keenly interested in the development of metal-working in the South and for several years headed the Southern Machinery and Metals Exposition. Many articles of his have appeared in trade papers in the metal field.

## Louisville Engineer Projects

(Continued from page 38)

tract is placed at \$254,000.

Hardstands—Contractor: Codell Construction Co., Winchester, Ky. Work is scheduled for completion in September 1952. Approximate amount \$238,000.

Blue Grass Ordnance Depot, Richmond Ammunition Storage Facilities—Contractor: Penker Construction Co., Cincinnati, Ohio. Work consists of the construction of one hundred 26 feet 6 inches by 81 feet, reinforced concrete, arch type magazines. The estimated completion date is March 1953. Approximate amount of contract \$1,922,000.

Motor Fuel Station—Contractor: H. de B. Forbes & Son, Richmond, Ky. The work consists of a concrete block service station, underground storage tanks, three dispensing units, etc. Scheduled completion date is September 1952. Approximate amount of contract is \$17,500.

Flammable Materials Storehouse—Contractor: Reed Sharp & Co., Knoxville, Tenn. The building will be approximately 30 feet by 54 feet, with a boiler room 10 feet by 18 feet. Construction will be of concrete block, steel roof trusses and insulated roof deck. It will have deluge sprinkler system. Estimated completion date is October 1952. Approximate amount of contract \$31,600.

Elevated Steel Water Tank—Contractor: W. E. Caldwell Co., Louisville, Ky. The tank will have a capacity of 250,000 gallons. Contract amount is \$73,900.

Jeffersonville Quartermaster Depot, Jeffersonville, Ind.

Box and Crate Shop—Contractor: J. D. Jennings Corp., Louisville, Ky. This is a one-story building 182 feet by 122 feet. Walls are of concrete block construction and floor of concrete slab. Estimated completion date is September 1952. Approximate amount of contract \$195,000.

Parachute Repair Shop—Contractor: Sullivan & Cozart, Inc., Louisville, Ky. The building will be approximately 275 feet by 154 feet by 23 feet high with two towers, one 52 feet high and one 72 feet high. It will have concrete block walls with corrugated cement asbestos siding on towers and upper portion of walls. Building will have structural steel roof framing and columns. Floor will be concrete. Shop portion of building will have acoustical treatment. Approximate amount of contract \$600,000.

Indiana Arsenal, Charlestown, Ind.

Rehabilitation of Hoosier Ordnance Plant, Charlestown, Ind.—Contractor:

(Continued on page 32)

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**QUICKEST PRIMING**  
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**THE GORMAN-RUPP COMPANY**

MANSFIELD, OHIO

## Louisville Engineer Projects

(Continued from page 51)

Whittenberg Construction Co., Louisville, Ky. Approximate amount of contract \$1,707,000.

Rehabilitation Construction of Indiana Ordnance Works, Charlestown, Ind. — Contractor: E. I. duPont de Nemours Co., Wilmington, Del. The work is scheduled for completion in September 1953. Approximate amount of contract \$16,000,000.

Additional Rehabilitation at Jefferson Proving Ground, Madison, Ind. — Contractor: Hatch Electric Construction, Div. of Heeco, Inc., Cincinnati, Ohio. Approximate amount of contract \$22,000; Contractor: A. L. Young Company, North Madison, Ind., Approximate

amount of contract \$24,000; Contractor: Repp & Mundt, Inc., 1604 Cottage Ave., Columbus, Ind., Approximate amount of contract \$41,000; the work is scheduled for completion in December 1952.

### Fort Campbell, Ky.

Barracks Buildings — Contractor: Southeastern Construction Co., Charleston, W. Va. The work consists of eight 225-man barracks buildings of concrete frame construction with concrete block curtain walls. The buildings are approximately 39 feet by 265 feet with wing 36 feet by 122 feet. Approximate amount of contract \$2,900,000.

Permanent Troop Housing — Contractor: J. W. Bateson Co., Inc., Dallas, Texas. The project consists of the fol-

lowing buildings: thirty-four enlisted men barracks, 225-man; eight enlisted men barracks, 165-man; four bachelor officer quarters, 25-man; eleven battalion headquarters; three regimental headquarters; eleven motor repair shops; one carpenter and paint shop, one utility shop; one communications building; two warehouses, 200 feet by 800 feet; one warehouse, 70 feet by 220 feet; one fire station; and one guard house. Work is scheduled for completion in December 1953. Approximate amount of contract \$21,000,000.

Bridges — Contractor: G & W Construction Co., Nashville, Tenn.; work consists of the removal of five existing wood bridges and the construction of five new concrete slab and beam bridges, 26 feet wide. Approximate amount of contract \$196,000.

### Camp Breckinridge, Ky.

Warehouses — Contractor: Schimpeler Construction Co., Louisville, Ky. Work consists of construction of two warehouses, approximately 64 feet by 250 feet. Buildings will be wood frame construction with concrete foundations and floor. Estimated completion date is October 1952. Approximate amount of contract \$150,000.

## Maryland Pre-Stressed Span

(Continued from page 37)

The maximum slump is named at two and one-half inches. Air content is set at three to six per cent. Cement with an interground entraining agent or regular cement with an admixture, or both, can be used by the contractor.

The wires used in the pre-stressing cables can have a tolerance of .002 of an inch plus or minus. They are to be of high tensile steel and especially manufactured for pre-stressing concrete. The minimum ultimate strength specified is 220,000 pounds per square inch. End anchorage for the cables are to be made by the Freyssinet Co., Inc., or of an approved equal.

The girders will be pre-stressed laterally at the ends, quarterpoints and midpoints, where the design includes a diaphragm, and through the top flange. These latter cables will total twenty-two in the length of the girder. Three cables will be stretched laterally at the quarter and midpoints; two at the ends. Each cable will consist of twelve wires of the .196 of an inch diameter.

## Louisiana Highway Bids

(Continued from page 28)

West Carroll — State Project 703-09-88, 4,250 cubic yards washed gravel furnished spot-dumped on certain public roads; Howard C. White, Lake Providence, La., \$19,125;

Assumption — State Project No. 703-09-89; 5,040 cubic yards washed gravel furnished f.o.b. railroad cars at various destinations for use on various public roads; Holloway Gravel Co., Inc., Amite, La., \$18,505;

Avoyelles — State Project No. 33-01-10, Purchase Requisition No. 36378A, 2,000 cubic yards base course gravel (Grade A) furnished spot-dumped on Bunkie-Marks-



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ville Highway, State Route No. 5; W. R. Core, Glenmora, La., \$4,060;

Evangeline — Purchase Requisition No. 35500A, Control Unit No. 202-1, 3,250 cubic yards base course gravel (Grade A) furnished spot-dumped on the Mamou-Point Blue Highway, State Route No. 219; Richard Coco, Marksville, La., \$9,587;

Claiborne — State Project No. 85-08-06, Part 2, sale of state-owned buildings and appurtenances, State Route No. 115, within the right of way of the proposed Homer Overpass over Louisiana and Northwestern R.R. in Homer on the Homer-Junction City highway; item 1, Perry C. Wideman, King Bldg., Homer, La., \$411; item 2, E. P. Bernard, 309 E. 3rd St., Homer, La., \$755.

### Missouri Road Awards

(Continued from page 24)

graded excavation; culverts, bridge & gravel or crushed stone surface; low bidder: J. W. Githens Co., Poplar Bluff, Mo., \$51,846;

Scott — SED S-710(3), 379 of a mile, graded excavation; culverts, bridge & aggregate type surface; low bidder: Penzel Construction Co., Jackson, Mo., \$26,347;

Lincoln — SH S-305(2)s, furnishing steel & other incidental items; low bidder: Mississippi Valley Structural Steel Co., St. Louis, Mo., \$19,976;

Marion — SN S-570(3)s, furnishing steel & other incidental items; low bidder: Illinois Steel Bridge Co., St. Louis, Mo., \$15,513.

### South State Road Bids in September at \$2,019,529

(Continued from page 33)

451; American Construction Co., Columbia, S. C., \$106,228; Ballenger Paving Co., Greenville, S. C., \$107,614; Robert Lee, Inc., Manning, S. C., \$112,275;

Union County — S.C. Dockets Nos. 44-269, 44-273, 44-274 & 44-275 — F.A. Project No. S-678(1) — (Road Work) — Roads 33, 52, 77 & 78 — the grading and bituminous surfacing of 4.721 miles on Road 33 from Road 25 southeasterly to Route 92; of 2.753 miles on Road 52 from Road 33 northeasterly to Route 215; of 1.496 miles on Road 77 from Road 52 southerly to Route 92, and of 1.327 miles on Road 72 from Route 92 southwesterly to Road 33; total length of project 10.297 miles; Alternate No. 2 — bituminous surfacing with seal (asph. prime, asph. cem. & C-B A.M.), with 84-inch reinforced conc. pipe; Wham Construction Co., Anderson, S. C., \$132,031; Spotts & Co., Newberry, S. C., \$134,816; Fox Construction Co., Inc., Lexington, S. C., \$135,260; Alternate No. 2 — bituminous surfacing with seal (asph. prime, asph. cem. & C-B A.M.), with 84-inch corrugated metal sectional plate pipe — 10-gauge, W. M. Reagan & Sons, Inc., Columbia, S. C., \$121,639; Sloan Construction Co., Inc., Greenville, S. C., \$130,284; Wham Construction Co., Anderson, S. C., \$131,107; Dickerson, Inc., Monroe, N. C., \$134,741; Spotts & Co., Newberry, S. C., \$134,816; Fox Construction Co., Inc., Lexington, S. C., \$135,260; Ballenger Paving Co., Greenville, S. C., \$140,938.

### Oklahoma Makes Awards

(Continued from page 32)

\$66,293; eight bidders;

Beckham County — SAP-1039(2) (SH) Pt. 1 Surf., S.H. 55 from Carter east and south, 7.781 miles 6-inch soil sub-base, 4-inch gravel base, 6-inch rock base, all 32 feet wide, 22-54 foot double bituminous paving, 5-foot double bituminous shoulders, estimated cost \$261,539; low bidder, Broce Construction Co., Woodward, \$240,161; two bidders;

Beckham County — SAP-1039(2) (SH) Pt. 2 Surf., S.H. 55 continuation of above project to Retropt, 4.054 miles similar construction, estimated cost \$116,211; low bidder, Broce Construction Co.,

\$106,875; two bidders;

Pushmataha County — SAP-598(10), U.S. 271 from 65 mile east of Finley northeast, 6.582 miles 34-foot roadbed, 8-inch soil sub-base, 9-inch stabilized rock base, 1½-inch blended rock asphalt paving 24 feet wide, 4½-foot single bituminous paved shoulders on 9-7-inch rock base, estimated cost \$272,336; low bidder, Anchor Construction Co., Muskogee, \$272,114; four bidders;

Haskell County — SAP-665(2), Pt. 1, S.H. 2 from Kinta north, 7.388 miles 32-foot roadbed, bridge, estimated cost \$159,563; low bidder, W. E. Logan & Sons, Muskogee, \$160,285; two bidders;

Haskell County — SAP-665(2), Pt. 2, (Continued on page 34)



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Texarkana, Tex.-Ark.

## Oklahoma Makes Awards

(Continued from page 33)

S.H. 2 continuation of above project north to Whitefield, 1,910 miles similar construction, estimated cost \$38,757; low bidder, W. E. Logan & Sons, \$39,772; two bidders.

Haskell County—SAP-665(3), Pt. 1, S.H. 2 from S.H. 31 in Kinta north, 7,779 miles 8-inch soil base, 8-inch rock base, 22-foot double bituminous paving, 5-foot paved shoulders, estimated cost \$282,597; low bidder, H. D. Youngman, Baxter Springs, Kans., \$279,871; six bidders;

Haskell County—SAP-665(3), Pt. 2, S.H. 2 continuation of above project to S.H. 9 in Whitefield, 2,287 miles similar construction, estimated cost \$75,895; low bidder, H. D. Youngman, \$75,099; six bidders.

Cimarron County—S-682(2)SH Pt. 1, farm-to-market road from 7.5 miles west of Boise City, West, 7,559 miles 30-foot roadbed, 6-inch stabilized asphaltic base, 22-foot single bituminous paving, 4-foot primed shoulders, estimated cost \$114,445; low bidder, Broce Construction Co., \$114,091; three bidders;

Cimarron County—S-682(2)(SH), Pt. 2, continuation of above project, 649 mile similar construction, estimated cost \$14,958; low bidder, Broce Construction Co., \$14,642; two bidders;

Pontotoc County—S-708(1), S.H. Pt. 1,

farm-to-market road from 1 mile east of Francis, east, 6,699 miles 34-foot roadbed, 3-inch gravel surface, estimated cost \$158,652; low bidder, Cohenour Construction Co., Ardmore, \$128,257; eight bidders;

Pontotoc County—S-708(1) (SH), Pt. 2, continuation of above project to S.H. 12 west of Allen, 3,276 miles similar construction, estimated cost \$88,651; low bidder, Cohenour Construction Co., \$75,699; eight bidders;

Pontotoc County—S-708(1), (SH), Br., on above project .019 mile for 40-foot I-beam extension to Cotton creek bridge, estimated cost \$23,867; low bidder, Brewer & McMichael, Holdenville, \$23,157; two bidders;

Kingfisher County—S-723(1) Co., county road, .993 mile from S.H. 51 half mile west of Hennessey, north, 6-inch asphaltic stabilized base, 22-foot single bituminous paving, estimated cost \$11,462; low bidder, Elliott Brothers, Perry, \$11,218; three bidders;

Kingfisher County—SAP-927(2) Gr., U.S. 81 on Main street north in Kingfisher, 639 mile 42-72.6-foot roadbed, estimated cost \$183,469; low bidder, Logan and Sons, \$157,858; four bidders;

Kingfisher County—SAP-927(2) Surf., U.S. 81 on above location 639 mile 4-lane 8-inch portland cement paving, 4-inch sand cushion, estimated cost, \$99,531; low bidder, W. E. Logan & Sons, \$95,387; five bidders;

Kingfisher County—SAP-927(2) Br., U. S. 81 on above location 361-foot I-beam span bridge, two 27-foot roadways, 4-foot median strip, 4-foot sidewalks on Kingfisher creek and 160-foot timber trestle over bridge, estimated cost \$315,570; low bidder, W. E. Logan and Sons, \$287,262; thirteen bidders.

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## VIRGINIA PROJECTS

(Continued from page 31)

pital at Roanoke; Franklin Memorial at Rocky Mount; Alleghany Memorial at Covington and Radford Community Hospital.

Department of the Army announced following Army Military construction program to be undertaken for Fiscal Year 1963 by the Army Corps of Engineers in Virginia: Fort Belvoir, \$2,887,000, warehouse, shops, laboratories, classrooms and utilities; Fort Eustis, \$3,092,000, operations building, shops, warehouse, hangar and utilities; Camp Pickett, \$142,000, classroom and office buildings; Richmond Quartermaster Depot, \$272,000, box shop; Vint Hill Farms Station, \$341,000, family quarters.

ACCOMACK COUNTY—National Advisory Committee on Aeronautics received low bid of \$160,031 from Byrne Organization, Inc., Norfolk, for precision radar thodolite tracking station.

BIG STONE GAP—Board of Education let contract at \$29,500 to Armstrong Construction Co., Kingsport, Tenn., for Wise County Negro High School.

CHARLOTTEVILLE—University of Virginia received low bid from Ivy Construction Co., at \$222,500 for natural resources building.

CHINCOTEGAGE—Navy Department Public Works Office received low bid from Irons & Reynolds, 1724 H St., N.W., Washington, D. C., at \$1,368,990 for extension of runways and additional improvements, Naval Aviation Ordnance Test Station.

CLARKE COUNTY—Clarke County School Board let contract at \$729,600 to Howard Shook & Son, Winchester, for Clarke County High School.

FAIRFAX COUNTY—Fairfax County let contract at \$113,648 to L. S. Sorber & Co., Vienna, for installation of 24" steel sewage force main 36" reinforced concrete effluent sewer and miscellaneous appurtenant structures.

FORT LEE—Corps of Engineers, Norfolk, let contract to Conquest Monette & Dunn Inc., Richmond, at \$348,016 for inclement weather training hangars.

GLOUCESTER—Board of Education received low bid of \$115,732 from C. E. Nuckols, Richmond, for consolidated high school.

HOLLINS—B. F. Parrott & Co., Roanoke, has contract at \$297,400 for Turner Hall, Hollins College.

LYNCHBURG—City Council plans for \$2,750,000 primary sewage disposal treatment plant.

(Continued on page 36)

## TINNEY DRILLING COMPANY Diamond Core Drilling

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## EQUIPMENT DEALERS and CONTRACTORS

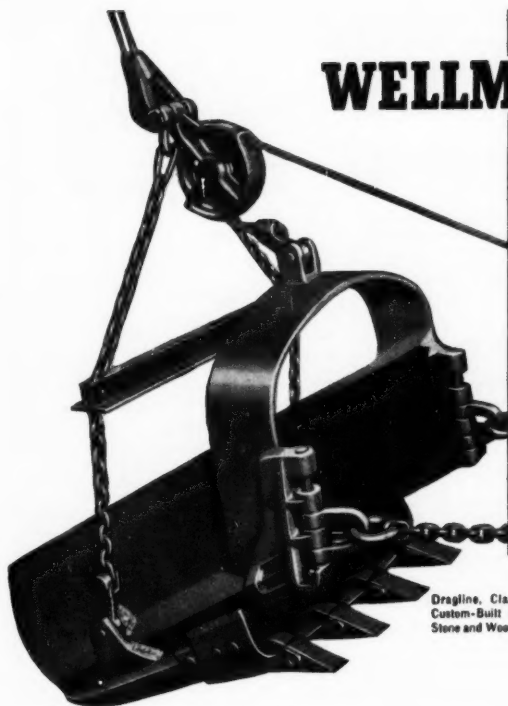
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CONSTRUCTION

Baltimore 3, Maryland



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Custom-Built Buckets  
Stone and Wood Grabs

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### MORE YARDAGE PER DAY

● Elimination of excess materials and careful weight distribution permit rapid, rhythmic operation of Wellman Dragline Buckets. Operators can cover a wider digging radius with this streamlined bucket.

Built of special alloy steel, using strong welded design, Wellman buckets provide strength and stamina for long-term economy. Perforated designs also available. You'll do better with Wellman.

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*Published by*

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## White Kerosene Torches For Many Heating Uses

White torches are widely used by contractors, highway departments, railroads, general industry. They are heavy duty units for dependable, satisfactory heating and melting.

They warm materials; melt snow and ice; thaw frozen pipes and machinery; loosen frozen car hoppers; burn weeds and refuse; preheat for welding; start foundry fires. Many uses where hot, clean, voluminous flame is wanted. Produce 1600° F. Model C-1, below, is only 3 gal. hand torch which burns entire fuel supply horizontally or vertically.



Hose connected torches, with 5, 15, 20 gal. heavy steel tanks. Burn 3 to 5 gal. per hour. Also with 2 burners, or on wheels. Round pot burner for kettles. G-1 is atomizing burner for high temp. with comp. air.



*Note: Amount of heat is determined by quantity of fuel burned—not by flame length.*

Write for Circular and Name of Nearest Dealer

Elkhart 3 **White Mfg. Co.** Indiana

## PRICED TO SELL

- 6—LeTourneau Model RUD Scrapers, Serials 59062, 59519, 59643, 59656, 58991 and 58992. Completely rebuilt, very good condition.
- 5—Euclid Model 6FDT Bottom-dumps, Serials 799 through 803, with Cummins Diesel Engines, good condition.
- 2—McCarthy Model 106 6" Vertical Drills, Serials 608 and 630.
- 1—Brookville Model BMD 6-ton Locomotive, 36" gauge, International UD-9

diesel engine. New in 1948, used one season, excellent.

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- 1—Chicago Pneumatic Diamond Core Drill Model CP-5J, Serial 1466, with steels and bits.
- 1—Ingersoll-Rand Model DA-35 Drifter drill.

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Equipment from Roy C. WHAYNE SUP-  
PLY Co. All their machines are new or  
nearly new. Call WAbash 6803 in  
Louisville, now!"  
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Pioneer 1st screen  
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Robins 20' belt tripper  
Universal 1/2 yd. backhoe

### TRACTOR & EQUIPMENT CO.

10008 Southwest Highway, Oak Lawn, Ill.

### VIRGINIA PROJECTS

(Continued from page 34)

**LANCHBURG**—School Board has plans and specifications for \$1,500,000 expansion of Lumber High School.

**MECKLENBURG COUNTY**—Board of Education let contract to Motley Construction Co., Farmville, at \$475,263 for East End Colored High School & Shops.

**MECKLENBURG COUNTY**—Board of Education let contract to Motley Construction Co., Farmville, at \$468,221 for West End Colored High School & Shops.

**MONROGRAM**—Navy Department, Norfolk, received low bid from Granick Sloan, Thompson Street & Waffinger, Richmond, Va.—Charlotte, N. C., at \$2,818,200 for radio transmitting facilities, U. S. Naval Communications Station.

**NORFOLK**—Mary F. Ballentine Home for Aged received low bid of \$450,900 from Doyle & Russell, Norfolk, for building.

**NORFOLK**—Norfolk School Board has approval for preliminary plans on new junior high school and swimming pool, \$1,500,000 to \$1,750,000.

**NORFOLK**—Board of Education let contract at \$220,000 to W. T. Gregory Construction Co. for additions and alterations to Maury High School.

**NORFOLK**—City plans Welfare Center Hospital, \$728,000.

**NORFOLK**—Navy Department let contract to Wise Contracting Co., Richmond, at \$1,817,000 for public works center transportation facilities, U. S. Naval Base.

**NORFOLK**—Richmond Greyhound Lines received low bid of \$328,700 from Dewey G. Weidie & Co., for service garage.

**OCEAN VIEW**—Holy Trinity Parish let contract to Robert R. Marquis, Portsmouth, Va., at \$341,371 for church and rectory.

**RICHMOND**—University of Richmond let contract at \$395,000 to Claiborne & Taylor, for T. C. Williams School of Law.

**RICHMOND**—City considering construction of 70,000,000 gallon per day primary sewage treatment plant and interceptor system, \$16,021,000.

**RICHMOND**—Thalhimer Brothers Inc. department store, plans new warehouse building, \$2,000,000.

**RICHMOND**—City received low bid of \$101,624 from Howard Mitchell Construction Co., for Maple Avenue Fire Station.

**ROANOK**—Board of Education let contract at \$212,000 to C. E. Noricks, Richmond, for addition to high school.

**WHITE MARSH**—Board of Education let contract at \$417,216 to John W. Daniel & Co., Danville, for consolidated high school.

**YORKTOWN**—Navy Department, Norfolk, let contract at \$2,444,000 to Wise Contracting Co., Richmond, for additional aviation and fleet fuel storage facilities, Naval Supply Center.

### GRAY CONCRETE PIPE CO.

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### SEWER AND CULVERT PIPE

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PLANTS: Thompsons, N. C., Phone 485, 410;

Baltimore, Md., Phone Broadway 410, 411;

Hamrocks, Md., Phone 2865;

Arlington, Va., Phone OTis 9084, 9085;

Willes, N. C., Phone 4855.

### WEST VIRGINIA

**BECKLEY**—A. T. Massey Coal Co. Inc., Richmond, considering 9-mile railroad spur, \$3,000,000, and expansion of coal mine facilities near Landisburg.

**BRIDGEPORT**—Wheeling Electric Company plans transformer station at \$114,120.

**HUNTINGTON**—Work started on first unit of a \$1,000,000 expansion of Huntington Orthopedic Hospital.

### PRIVATE BUILDING

(Assembly, Commercial, Residential, Office)

	September, 1952	Contracts Awarded	First Nine Months
Ala.	Contracts Awarded	Contracts Awarded	Contracts Awarded
Ark.	\$1,293,000	\$2,413,000	\$41,834,000
D. C.			843,000
Fla.	400,000	6,989,000	
Ga.	9,087,000	11,649,000	108,471,000
Ky.	3,079,000	15,700,000	47,945,000
La.	1,090,000	8,694,000	
Mo.	1,999,000	2,371,000	30,967,000
Md.	6,436,000	4,935,000	69,270,000
Miss.	618,000	384,000	8,998,000
Mo.	398,000	2,300,000	4,673,000
N. C.	617,000	540,000	15,764,000
Okla.	500,000	7,868,000	1,341,000
S. C.	715,000	1,450,000	15,394,000
Tenn.	1,103,000	1,775,000	35,893,000
Tex.	10,931,000	24,985,000	125,110,000
Va.	1,368,000	4,830,000	61,836,000
W. Va.			5,442,000
<b>TOTAL</b>	<b>\$39,181,000</b>	<b>\$82,026,000</b>	<b>\$597,374,000</b>

### PUBLIC ENGINEERING

(Dams, Drainage, Waterworks, Sewers, etc.)

	September, 1952	Contracts Awarded	First Nine Months
Ala.	Contracts Awarded	Contracts Awarded	Contracts Awarded
Ark.	\$ 385,000	\$ 335,650	\$17,894,000
D. C.	776,000	2,635,000	6,285,000
Fla.	257,000	935,000	2,357,000
Ga.	3,385,000	49,315,000	101,364,000
Ky.	2,780,000	21,365,000	76,784,000
La.	2,150,000	550,000	18,248,000
Mo.	3,783,000	4,325,000	37,802,000
Md.	3,708,000	3,395,000	17,149,000
Miss.	2,780,000	7,705,000	13,311,000
Mo.	1,652,000	4,715,000	11,692,000
N. C.	1,097,000	1,045,000	27,153,000
Okla.	2,017,000	1,490,000	28,368,000
S. C.	534,000	445,000	25,915,000
Tenn.	1,498,000	2,165,000	44,317,000
Tex.	9,841,000	18,481,000	180,010,000
Va.	770,000	20,886,000	30,499,000
W. Va.		164,000	60,000
<b>TOTAL</b>	<b>\$36,058,000</b>	<b>\$133,351,000</b>	<b>\$738,135,000</b>

### INDUSTRIAL

	September, 1952	Contracts Awarded	First Nine Months
Ala.	Contracts Awarded	Contracts Awarded	Contracts Awarded
Ark.	\$1,125,000	\$6,189,000	\$114,921,000
D. C.			9,414,000
Fla.	6,321,000	430,000	87,954,000
Ga.	25,506,000	92,528,000	92,525,000
Ky.	1,190,000	1,190,000	483,600,000
La.	1,196,000	420,000	206,378,000
Md.	245,000	356,000	68,704,000
Miss.	73,000		35,556,000
Mo.	1,933,000	100,000	7,892,000
N. C.	1,801,000	760,000	71,400,000
Okla.	426,000	850,000	32,472,000
S. C.	1,810,000	2,649,000	51,187,000
Tenn.	5,577,000	2,485,000	580,396,000
Tex.	7,796,000	1,317,000	285,352,000
Va.	558,000		20,854,000
W. Va.	200,000	4,350,000	38,401,000
<b>TOTAL</b>	<b>\$57,517,000</b>	<b>\$21,664,000</b>	<b>\$2,190,016,000</b>

### PUBLIC BUILDING

	September, 1952	Contracts Awarded	First Nine Months
Ala.	Contracts Awarded	Contracts Awarded	Contracts Awarded
Ark.	\$2,314,000	\$12,296,000	\$ 36,309,000
D. C.	7,677,000	3,947,000	27,788,000
Fla.	33,300	1,532,000	16,832,000
Ga.	2,147,000	11,569,000	36,873,000
Ky.	2,588,000	10,444,000	58,766,000
La.	276,000	17,865,000	27,097,000
Md.	3,025,000	10,429,000	41,838,000
Miss.	3,393,000	59,288,000	89,714,000
Mo.	316,000	1,625,000	18,128,000
N. C.	154,000	2,650,000	13,564,000
Okla.	3,444,000	15,342,000	32,168,000
S. C.	193,000	2,351,000	23,650,000
Tenn.	1,999,000	1,929,000	35,981,000
Tex.	4,388,000	1,119,000	53,911,000
Va.	7,088,000	42,071,000	155,865,000
W. Va.	8,028,000	18,315,000	68,030,000
<b>TOTAL</b>	<b>\$49,895,000</b>	<b>\$208,633,000</b>	<b>\$765,917,000</b>

### ROADS, STREETS, BRIDGES

	September, 1952	Contracts Awarded	First Nine Months
Ala.	Contracts Awarded	Contracts Awarded	Contracts Awarded
Ark.	\$ 73,000	\$1,740,000	\$17,400,000
D. C.	465,000		16,321,000
Fla.	51,341,000	3,560,000	
Ga.	4,248,000	3,730,000	40,676,000
Ky.	3,080,000	3,080,000	35,017,000
La.	4,609,000	2,080,000	41,480,000
Mo.	1,739,000	3,390,000	40,548,000
Md.	1,947,000	2,950,000	31,831,000
Miss.	1,407,000	10,735,000	9,525,000
Mo.	719,000	1,340,000	33,878,000
N. C.	4,663,000	1,060,000	31,875,000
Okla.	8,612,000	1,620,000	36,136,000
S. C.	2,020,000	1,000,000	18,799,000
Tenn.	3,198,000	50,000	19,554,000
Tex.	8,585,000	94,912,000	115,066,000
Va.	67,000	2,360,000	16,742,000
W. Va.	1,532,000	360,000	13,425,000
<b>TOTAL</b>	<b>\$44,054,000</b>	<b>\$181,428,000</b>	<b>\$519,873,000</b>

# "The **BIG SAVING** was **FOSTER RENTAL PILING**"

On complicated 3-sided cofferdam for the  
\$5 million East Bronx Unionport Bridge Construction.

Says John Ury, Project Manager  
for Contractors:

WM. M. MOORE BUILDING CORP.  
and

LOPIER CONSTRUCTION CORP.  
75 West 190th Street  
Bronx, New York

Construction started in 1949, and skill-  
ful driving of 30 to 45 ft. Interlocking  
Steel Sheet Piling by these 2 contrac-  
tors made this an economical, success-  
ful job. Unionport Bridge crosses  
Westchester Creek in East Bronx.

An interesting installation of piers had to be constructed atop 35-year old existing caissons. Here was a tough water seepage problem in a complicated 3-sided cofferdam — approximately 1,000 gpm had to be pumped out of the cofferdam by two 6-inch pumps. Steel Sheet piling was needed — on time — in the exact section and lengths (30 to 45 feet). And Foster had it — just what the job required. A phoned order — a prompt delivery, a dependable quality — and a low cost, requiring no huge purchase investment on the part of the contractor, made FOSTER RENTAL PILING the 100% answer for this job.

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PITTSBURGH 30, PA. • NEW YORK 7, N.Y. • CHICAGO 4, ILL. • HOUSTON 2, TEX.

Rental Piling had to be driven considerably below the bed of the creek, with extra reinforcing to protect against swells.



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## But Not the Mower with an OLIVER Hydro-Cut!

Yes, here's the mower that not only cuts anything from thick matted grass to heavy brush but also cuts maintenance costs to the bone . . . 50% and even more according to cost records of users!

When an Oliver Hydro-Cut hits a bottle . . . a piece of wire or other roadside debris, you don't lay up the mower for expensive repairs. With the ordinary mower, this impact breaks or damages knife sections, guards, knife heads and even pitman drives.

The Oliver Hydro-Cut is hydraulically operated; there is far less impact when the cutter bar

strikes debris. The "metal in motion" behind the knife in an Oliver is approximately 22 pounds as compared to over 100 pounds for a mechanical mower. It is the vastly increased impact load in the ordinary mower that causes the excessive damage and maintenance costs. And, for extra safety, Oliver has a hydraulic blow-off valve which instantly unloads the force behind the knife when the mower strikes an obstruction.

If you're interested in saving hundreds of dollars in maintenance costs per year, see or call your Oliver Industrial Distributor.

## THE OLIVER CORPORATION

19300 Euclid Avenue, Cleveland 17, Ohio



A complete line of  
industrial wheel and  
crawler tractors

OLIVER Corporation 19300 Euclid Ave. • Cleveland 17, Ohio	
<input type="checkbox"/>	Please send me literature on the Oliver Hydro-Cut Mower.
<input type="checkbox"/>	Name and address of my nearest Oliver Industrial Distributor.
Name.....	.....
Company.....	.....
Address.....	.....
City.....	State.....

"... the 99-H is the most versatile grader I have ever seen, as well as the most maneuverable."

"This grader is on U.S. Route 35, where we are engaged in a project involving 2.05 miles of grading, draining and ditching, as well as paving the highway in North Charleston between Two Mile Creek and Tyler Creek.

"This is the first Austin-Western grader to be used in this family of contractors, and I have no hesitancy in saying that the 99-H is the most versatile grader I have ever seen, as well as the most maneuverable. It will do jobs that other graders will not do, and, when the going is really tough, it will operate under conditions that other graders would not attempt. Just recently, after several days of heavy rain, the 99-H was doing its chores on schedule. Two other graders of well-known makes were compelled to stand by until the terrain was favorable to the extent that they could be put to work. This adds up to more hours operation every week for the 99-H.

"Aside from the standpoint of the 99-H's ability to take tough going in stride, it is also the easiest grader to operate that I have ever owned. The operators like it, which means we get more efficiency from them."



Howard Price, President  
Howard Price and Company  
Huntington, W. Va.

HOWARD PRICE AND COMPANY

*Howard Price*  
President



**T**hank you, Mr. Price, for putting into words—what so many other contractors have learned—that Austin-Western's *exclusive* combination of ALL-WHEEL DRIVE and ALL-WHEEL STEER means top grade performance by America's top grader.

AUSTIN-WESTERN COMPANY • Subsidiary of Baldwin-Lima-Hamilton Corporation • AURORA, ILLINOIS, U.S.A.

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SINCE 1899—CONSTRUCTIVE EQUIPMENT